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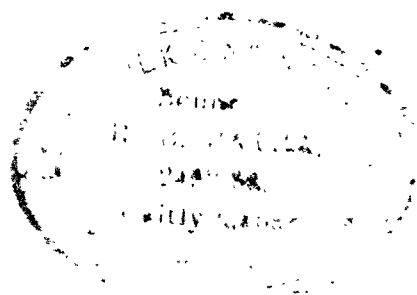
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MAN IN INDIA.

Vol. XVII. January—March, 1938.

No. 1.

I. A NOTE ON THE PRESENCE OF LIGHT- COLOURED EYE-IRIS AMONGST THE POPU- LATION OF NORTH-EASTERN INDIA.

By

BHUPENDRANATH DATTA, A.M. (*Brown*) DR. PHIL. (*Hamburg*).

In the *Ethnographical 'Report of the Census of India 1931, Vol. I, Part III* Dr. B. S. Guha has given the result of his investigation of the eye-colour of the people of Bengal. He says, "In the colour of eyes there is a small percentage of light clear brown (Nos. 6-7) among both the Brāhmanas and the Kāyasthas, but the majority have dark-brown eyes (Nos. 2-3). The Pōds have either black or dark-brown eyes.* But in this note it is shown that eye-colours of still lighter shades are to be found amongst the people of Bengal and Assam.

In this paper, observations on the light iris-colour of eleven Hindu subjects from Bengal and Assam have been recorded. Some of the subjects mentioned in this note have been examined during my field work in the above-mentioned provinces.

* *Census of India 1931, Vol. I. India-Pt. III, Ethnographical. A Racial Affinities of the Peoples of India. By B. S. Guha, 1931, P. XL.*

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The rest have been sought out and examined after hearing the report of somatic peculiarities about them. The subjects come from endogamous orthodox Hindu society and are conservative in their marital relations. Hence, any question of foreign influence is not to be thought of in tracing these somatic peculiarities.

The subjects examined are from the following castes: Kolita, Kātni Nāṭ, Rajbans'i, Vaidya, Brāhmaṇ, Tānti. They hail from different parts of Assam and Bengal.

In examining the subjects, Martin's Eye-colour table, von Luschan's Skin-colour table and E. Fischer's Hair-colour table have been used.

In examining the eye-colour of the subjects the following peculiarities in eye, hair and skin-colour have been observed:—

Name.	Caste.	Profession	District.	Colour of Iris	Colour of Hair	Colour of Skin.
1. Santiram.	Kalita	Cultivator	Kamrup. (Assam)	8	Tawny Colour	16
2. Jadu	Katni Nat	„	Jolabasti (Assam)	7	27	22
3. Mangalu	Rajbansi	„	Gopeswar (Assam)	8	27	20
4. Sailendra Sen.	Vaidya	Student	Dacca Bengal	9	Tawny colour	17
5. Jyotish Chowdhury	Rahri- Brahmon	„	Bengal	8	27	20
6. Haranath Banerji	„	„	Khulna (Bengal)	8	27	10
7. Phoni N. Dutta	Vaidya	Press worker.	Sylhet (Bengal)	8	Tawny colour	19

A Note on the Presence of North-Eastern India. 3

8. Profulla Das	Tanti Student	Chandernagore	8	Lighter than 27	14
		(Bengal)			
9. Jatindra Datta	„ Business	do	10	„	23
10. Haripada Das	„ Clerk	do	11	White Hair	10
11. Biva Das	„ 7 years (girl)	do do	13	Lighter than 27	25

Apart from these, subjects with Iris-colour ranging between numbers 5 and 6 have been observed in my field work in Bengal and Assam. But as the object of this note is to record that iris-colours of lighter shades than recorded in the Ethnographical report of 1931, are also to be found in the north-eastern part of India, these are left out in this paper.

Coming to the study of our data, we find that as regards the colour of the Iris of the eye, Martin¹ has given the following designations :—

- Nos. 7, 8—Grünlich (Greenish)
- „ 9, 10—Dunkelgrau (dark grey)
- „ 11, 12, 13—Hellgrau (Light grey)
- „ 14, 15—Blau (Blue)
- „ 16—Hell blau (Light Blue)

In our list of data we find that the range of variation of the iris-colour extends from 7 to 13 *i.e.* from greenish to light-grey. Out of these, *seven* subjects have iris-colour ranging between 7 and 8, *i.e.* these are greenish, *two* have iris-colour ranging between 9 and 10, *i.e.* these are dark-grey, while the rest *two* have numbers respectively 11 and 13, *i.e.* these are light-grey. But Martin

¹ R. Martin—“*Lehrbuch der Anthropologie.*” Fwite Anflag. Vol. I. p. 218.

says,² "Für die Bearbeitung des Materials kamen die Nummern 1-6 als braun, die Nummern 7-12 als meliert, and die Nummern 13-16 als blau Zusammen. (For the working of the materials the Nos 1-6 are grouped together as brown, Nos 7-12 as mixed and the Nos. 13-16 as blue). Here we find that our two subjects with Iris Nos. 11 and 13 which fall within the abovementioned group of "light grey" are for practical work divided into mixed and blue. Hence our data No. 13 falls within the group "blue".

Thus according to Martin the iris-colour number of our subjects with the exception of number 13, fall within the group labelled 7 to 12 *i. e.* from greenish to light-grey; these are designated as of mixed iris colour, and the No. 13 falls within the group 'blue'. Hence, we have one subject with blue-coloured iris.

Here we see, that with the exception of the No. 13, Martin has labelled the grey group as "mixed". Hence our subjects in consideration here have, with the exception of one, 'mixed' iris colour characteristic.

Further, Martin speaks of a correlation between Skin, Hair and Eye-colour with the primates and says that, "such a correlation is also retained primarily and frequently for men" (*eine solche korrelation ist auch für den Menschen als primäre und bänfigere verhattin*);³ but he also says that with the Europeans, as a result of numerous

² R. Martin *op. cit.* p. 219.

³ Martin—*op. cit.* p. 507.

mixtures this individual connection remains hidden (Num büm Europäer ist wohe infolge fahlreicher Mischungendieser fusamnerpany individuelle gelockert).⁴

Now, let us enquire into the nature of the skin and hair colour of our subjects. The range of variation of the skin-colour of the subjects here is between 10-25. Martin divides Luschen's skin-colour scale into different groups. He says⁵ that nos 1-5 correspond with the colours of ænemic Europeans, Nos. 6-35 correspond with skin-colours rich in blood, which extend from the lightest colour (16) to the darkest colour (35); and he gives different names to the various numbers of Luschan's scale. Thus according to this scheme of Martin, our subjects have got skin-colours ranging from 'light brown' (No 25) to 'carmine white' (No 10). Here it is to be noted that both the extremes of our data here fall within the province of Bengal. Further, it is to be noted here that the subject with carmine *i. e.* red-white skin-colour has got iris-colour numbering 8, *i. e.* it is greenish, while the subject with the darkest taint of light-brown colour in this list numbering 25, has got the iris-colour No. 13, *i. e.* it is light-grey. Again, the former comes from the Brähman caste while the latter is of Tanti (weaver) caste.

As regards hair-colour, three of the subjects have got tawny hair-colour (the corresponding hair-colour number is not to be found in Fischer's

⁴, ⁵ Martin—*op. cit.* Pp. 507, 207.

scale), some have typical black-colour as depicted in No. 27 of Fischer and some have colour of lighter shade than No. 27. It means that, with the exception of the tawny-coloured hair, the rest are of different shades of black colour. Most of our subjects have iris-colour ranging from greenish to light-grey. These, according to Martin, are of mixed variety, and he cites the cases of the Europeans of mixed blood who show the mixture in their disharmony between hair and eye-colour.⁶

Then comes the solitary instance of the subject with iris-colour No. 13. According to Martin, for practical purposes it should be counted as "blue". In the list given above, it is to be seen that this subject has got skin-colour No. 25 which, according to Martin, falls within the light brown group and the colour of hair is lighter than 27, i.e. it is of a lighter shade of black. Here we see that in this subject there is no corresponding lighter colour in hair and skin. Hence the subject clearly shows mixed characteristics.

The presence of No. 13 eye-colour amongst this data is an enigma. The subjects mentioned in the list who hail from Chandernagore are related to each other. The subject in question who is a girl, is a niece of this closely-related family by her mother's side. The girl's father, Haripada Das mentioned in the list, has got the eye-colour No. 11 and skin-colour No. 10, the hair is white on account of age. This means,

⁶ Martin, *op. cit.* Pp. 507.

the father's eye-colour is light-grey, and the skin-colour is red-white, while the mother Manorama Das has got eye-colour No. 5 and the hair-colour is of lighter shade than 27 and skin-colour is No. 16. That means, the mother has got light-brown iris-colour, lighter shade of black hair and light-brown complexion.

Here it is evident that the girl-subject has got eye-colour of lighter shade than that of the father, but the complexion is of darker shade than that of the mother. Thus the subject having blue eye with brown skin is evidently of heterozygotic character. Whence comes this blue eye is the question. The father has got light-grey iris-colour but the maternal side has also got individuals with 'mixed-coloured' eye-iris as well. Enquiry has elucidated the fact that these Tanti families are conservative Hindus of orthodox Hindu persuasion. At least their pure Hindu pedigrees up to the third generation are well known. Hence the thought of any outside strain in them can hardly be entertained. But nobody can be sure of the remote past.

The subjects mentioned here all belong to conservative and endogamous castes and are of orthodox Hindu religion. They are neither the products of any sort of intermarriages with non-Hindus nor intercaste marriages, as I ascertained from them. Hence it is to be accepted that the grey and blue eyes are not foreign strains in them. Of course, these characteristics are not common in Bengal and Assam.

Here the question will arise that whether these characteristics betray trace of any foreign influence in the population of Bengal and Assam. Dr. Guha in his *Ethnographical Report of the Census of India*, 1931, speaks of traces of blue and grey-blue eyes (Nos. 9-16) met with in the Pathan and Kaffir tribes of the N. W. Frontier Province. The Chitpavan Brāhman̄s have according to him, 4 p. c. of grey (Nos. 8-9) eyes. The Sāraswats have 2 p. c. of grey eyes. Again, Dr. J. Karve finds 5 p. c. of grey-blue eyes with the Chitpavans. Here it should be noted that Martin's greenish and dark-grey (Nos. 8-9) have been expressed by Guha's grey. But his and Karve's expression 'grey-blue' cannot be identified with Martin's nomenclature. Any way, according to these investigations, the presence of grey and blue eyes are not rare in India proper even. It is no wonder that a strict scrutiny will discover the presence of this element even in North-east India.

Finally it is to be said that the Government Ethnographical Report gives the lightest eye-colour amongst the people of Bengal as 7, while it is silent about Assam. But the data given in this note shows that in Bengal the iris-colour extends to No. 13, and in Assam to No. 8. If the light-coloured eye-iris is to be found elsewhere amongst the Hindus, then it is possible to discover the same strain in North-east India as well. For this reason wider investigation is necessary.*

* This paper was read before the Anthropological section of the *Indian Science Congress* at its Twenty-third annual sessions, held at Indore, January, 1936.

II. RACIAL ADMIXTURE IN THE UNITED PROVINCES : SCIENTIFIC INQUIRY.

By

D. N. MAJUMDAR, M.A., P.R.S., PH.D.

Anthropometric measurements in India were first systematically taken by Sir Herbert Risley in 1891. They were published in a Volume of *Ethnographic Appendices to the Census of India*, 1901. The difficulties of securing the services of trained anthropologists in those days were indeed great, and the technique also was not sufficiently developed, so that doubts have been freely expressed by later workers about the reliability of the data and the methods of analysis used by him. The more recent development of statistical analysis has made it possible to test the reliability or otherwise of anthropometric data; and the conclusions arrived at on the basis of statistical analysis in earlier days require to be revised. Many of Risley's conclusions have been challenged by later workers, and with sufficient reason too. Dr. J. H. Hutton points out in the preface to the *Ethnographic volume of the Census of India*, 1931,—“Risley's conception of India as isolated from the rest of Asia and inhabited entirely by barbarous tribes until the Aryan invasion of *circa* 1500 B.C., already impugned, has proved to be erroneous by the discovery of Mohenjodaro. His explanation of brachycephaly in the west of India due to

Scythian invasion in historic times, has been justifiably attacked on the score that the population so introduced was never numerous enough to make a complete and permanent change in the somatic characters of the population. Similar objections have been taken against his hypothesis of the Mongolo-Dravidian origin of the Bengalees."

Prof. P. C. Mahalanobis has analysed the anthropometric data published by Risley (*Sankhya*, Vol. I, Pt. I) and has found a number of more or less serious mistakes in the calculation of average values and individual measurements and come to the conclusion that his (Risley's) primary data of individual measurements can be used with safety especially after the corrections made by him.

But however reliable the actual measurements may be from the statistical point of view, the fact that Sir Herbert Risley had 'selected' his subjects for measurements has certainly rendered the data of dubious value. Most of the measurements were taken by his assistants, and his share in the collection of data lay in teaching the measurers the use of instruments, in exercising a general supervision over the work and in supplying them with detailed printed instructions regarding the technique of the measurements.

Risley wanted to determine the standard type of each caste and for this purpose individuals of clearly exceptional features were excluded. Exception has rightly been taken to this method. The search for the standard type has naturally led to a selection of the subjects, and it is difficult to say

how far his instructions were carried out by his assistants, but it appears that the selection has had significant effect on the calculated values for certain characters, as the standard deviations of Risley's measurements (calculated by Prof. P. C. Mahalanobis) tends in most cases to be lower than values for corresponding characters in groups measured by other anthropologists. (Cf. G. M. Morant's article on, "*An Attempt to Estimate the Relative Variabilities of Various Populations*" in *Zeitschrift Fur Rassan Kunde*, 1935, Band II, Heft 3,)

Since Risley's time, anthropometric measurements of a number of tribes and castes in India have been undertaken by anthropologists, both Indian and foreign, but unfortunately the data collected by them are seldom comparable as there has been no agreement regarding the number of characters of a particular sample measured or the technique of measurement. In some cases, however, the number is obviously too small. Besides, there is in all cases a lack of estimates of personal equation involved. Again, individual measurements have not been published which precludes the possibility of re-examining them in the light of recent advances in the technique of statistical analysis. Two examples will explain the position clearly. Sometime back, Dr. A. N. Chatterjee of the Calcutta University published the results of his analysis of the measurements of 208 *Hos* of Seriakela (two groups of 165 and 43) based on four measurements and three indices. On the basis of four absolute characters, Dr. Chatterjee has classi-

fied the Hos into 'six fundamental types' as he calls them, viz, (1) *Dolichocephalic-Hypsicephalic-Leptorrhine* (2) *Dolichocephalic-Hypsicephalic-Platyrrhine* (3) *Dolichocephalic-Chamaecephalic-Platyrrhine* (4) *Dolichocephalic-Chamaecephalic-Leptorrhine* (5) *Brachycephalic-Hypsicephalic-Leptorrhine* (6) *Brachycephalic-Hypsicephalic-Platyrrhine*, and comes to the following hypothesis about the racial composition of the Hos :—"The underlying predominant stratum seems to be proto-Negroid with indications of a faint strain of Proto-Australoid admixture. The Negrito sub-type of the Palae-Alpine group seems to have played some part in the formation of the type. The chronological relation and the extent of admixture between the Proto-Negroids and the Palae-Alpines we are not in a position to indicate from the physical data alone. The Caspian element seems to have played an important part in the evolution of the type and appears to have been longer in contact with the Proto-Negroids than the Alpines." This case illustrates Dr. G. M. Morant's statement that "the confidence with which anthropological theories are propounded is often found inversely proportional to the amount of material to support them." (Article on "A Contribution to the Physical Anthropology of the Swat and Hunza Valleys based on Records collected by Sir Aurel Stein"; *Foot-note*, page 40, *J. R. A. I.*, Vol LXVI, 1936). Owing to the considerable variability exhibited by all unselected populations it is evident that if Dr. Chatterjee had cared to analyse the measurements of any supposed homogeneous group in India or elsewhere

he would certainly have got all the fundamental types he has found among the Hos, and probably more.

In his presidential address to the anthropological section of the Indian Science Congress, 23rd session at Indore, Mr. H. C. Chakladar had advocated the use of a large number of definite and indefinite characters for statistical analysis and comparison. In a paper read before the present Jubilee session of the Congress, Mr. Chakladar has reiterated his faith in number. He records 22 measurements on the head, 30 measurements of the body proportions and 40 observations. All these were taken on 258 Kashmīris. But however satisfactory this method of investigation may be, there are obvious difficulties. It is difficult to secure subjects for measurements who will submit to 92 tests, and even if it were possible in the laboratory, it is extremely unlikely that such data can be safely collected in the field.

If anthropologists differ so widely in their methods and in technique, it is time that a critical estimate of the reliability of the anthropometric data should be made.

In connection with the *Census of India*, 1931, Dr. B. S. Guha of the Zoological Survey of India has published the results of analysis of the measurements of 34 racial groups of which 14 were Brāhmaṇs, 16 belonging to various Hindu castes and 4 tribal. The total number of persons measured by him were 2,511. With the exception of 171 Nicobarese, all these subjects were measured by Dr. Guha himself. After Sir Herbert Risley's, Dr.

Guha's work should rank as the most important contribution to our knowledge of the somatology of the Indian races in recent years. In some respects Dr. Guha's work is unique. The statistical analysis of the data is based on 29 characters including linear, arcal, and indical, and denoting both shape and size, and this is the largest number yet attempted by an anthropologist for so large a population. Besides he has computed 627 crude co-efficients of racial likeness of which 520 are based on his own measurements, a number which is easily the largest yet calculated on living subjects.

Dr. Guha claims that, as all the measurements were taken by himself, the influence of personal equation of the value on living subjects has been very much smaller than those based on the cranial measurements of several independent investigators. No evidence, such as data which would provide estimate of personal equation, in support of this assumption is supplied however, and it remains to be seen how far this contention of his is acceptable. We hope that Dr. Guha will soon publish the individual measurements so that other workers may compare their own data with those of Dr. Guha. There is an urgent need for investigation based on repeated measurements of the same individuals which will give reliable estimates of the personal equation of single workers in measuring series of living people, and of the accuracy with which comparisons can be made between such data collected by different workers. While these experiments are being carried on it is necessary to compare the statistical constants recorded by

Dr. Guha with similar data collected by other investigators working on the same technique in various areas.

We have now materials for comparison so far as the racial groups of Bengal are concerned. Dr. Guha's calculated values for certain important Bengal groups can be tested by comparing them with similar data gathered by some of his colleagues. Besides, there are the measurements given by Sir Herbert Risley which, in spite of the fact that the data were 'selected,' can be statistically analysed and comparison made. But, as for the United Provinces and the Punjab, we have yet little material for racial comparisons.

We have found that Sir Herbert Risley's hypothesis regarding the origin of the Māhrāṭṭās and the Bengalees are untenable, but we have not cared to discuss his theory regarding the origin of the people of these provinces. According to Sir H. Risley, the United Provinces is racially Āryo-Draviḍian, that is, it contains a population which represents a mixture between the Āryans and the Draviḍians. Both these words, as we already know, are linguistic rather than ethnic or racial. It is therefore necessary to investigate the problem of the racial admixture in these Provinces, to determine how far the Indo-Aryan strain is responsible for the racial make-up of the people of these Provinces and how far the Draviḍian speaking racial groups have moulded the features of the Indo-Āryan stock. An analysis of the racial composition of the population may give us some

idea about the nature of this admixture between the various racial groups and about the fundamental relation between race and caste.

We can also discuss the basis of the so-called Āryan hypothesis (for it is on the banks of the Ganges that the sacred literature of India was compiled, so that the centre of diffusion of Āryan culture must be placed somewhere in these Provinces). Besides, by an analysis of the blood groups and by other methods it may be possible to throw light on the quality of the population, so that in the near future, we may be able to develop an eugenic programme for the Province.

Measurements on the human body or its parts are taken for—(1) industrial purposes, (2) regulation of art (3) military selection, (4) medical, surgical and dental purposes, (5) detection of bodily defects and the correction in gymnastics, (6) criminal and other identification, (7) eugenic purposes, and (8) for scientific investigation. Our purpose is mainly scientific, that is, to ascertain the structure and functions of the human body with a view to determining how far these are dependent on inherited or racial factors and how far they vary with environment. When we possess adequate anthropometric data representative of the various groups, we may expand our scope and inquire into the quality of the population we are dealing with so that it may be possible to devise ways and means to improve our breed.

This aspect of the science has so far been neglected, partly owing to prejudice and partly to

a lack of adequate data. We evince anxiety to improve the breed of cattle and other domestic animals but we have never cared to discuss even the possibility of applying our scientific knowledge on the subject to the noblest species in the animal kingdom. The ancients understood this problem and the elaborate social organisation we have inherited in the form of the caste system was largely based on eugenic principles. Today when science has discovered an efficient method to cope with the problem of improving the breed of animals, it is surprising to find apathy towards the welfare of *Homo sapiens*.

Under the auspices of the Department of Economics and Sociology, Lucknow University, an anthropometric survey of the people of the United Provinces has been undertaken. The work is being done on the following lines. Anthropometric measurements of the different castes and tribes of U. P. are being taken. The technique of measurements is that of the Monaco Agreement and as such the data will be comparable with those of Dr. Guha. The total number of absolute characters is the same as recorded by Dr. Guha. Where a caste is divided into endogamous groups, like the Kāyasthas of U. P. who are sub-divided into twelve endogamous groups, 50 individuals of each of these groups are being measured. Photographs of representative men and women of each of these castes and sub-castes are being collected. Besides the measurements, blood groups also are being

tested. At present the people will be classified into four groups, O, A, B and AB, but very soon, in accordance with the scheme, M. N. and MN also will be tested. In this connection I must acknowledge the assistance that I have received and am receiving from Prof. R. A. Fisher's laboratory, viz, the Galton Laboratory, University of London.

—:O:—

III. THE RACIAL COMPOSITION OF THE HINDUKUSH TRIBES.*

By

B. S. GUHA, M.A., PH. D.

The region south of the Hindukush and Karakoram mountains and lying approximately between *lat.* 35°-37° N. and *long.* 70°-76° E., occupies a strategic position in the racial geography of India, for, as seems certain, it is through the passes of the high mountain chains which guard her north-western boundaries that the northern steppe folks reached India; and it is in the difficult valleys flanked by lofty spurs and drained by the tributaries of the Upper Indus that we still find the remnants, if not of the main invaders, at least of those of kindred tribes who came in their wake.

The earliest references to the tribes living in this region are given by Herodotus, who speaks of 'Other Indians' as occupying the frontiers between Kaspetyros or Kashmir and the Paktyan country or Afghanistan (III, 102-105). Strabo (XV) and the elder Pliny (Natural history, XI, 36), however, specifically mention *Derdai* or *Dardae* as the generic name of the tribes, and refer to *Megasthenes* as their authority. The latter must have had in his mind the Samskrit name 'Darada' mentioned in the Purāṇas and the Epics in a

* This was the Presidential Address in the Anthropological section of the 25th session of the Indian Science Congress held at Calcutta in January, 1938.

generic sense for the people of the N.-W. Himalayan region who were warlike and among whom the Buddha had sent his missionaries.

In modern times the earliest mention of these tribes was by Moorcroft, who, in 1821, first drew attention to the Dards. Following him Vigne in 1835 and Cunningham in 1846 travelled through Baltistan and published some accounts of the tribes living there. In 1847, Young and Agnew crossed the Indus at Bunji and reached Gilgit. Unfortunately the report of these two intrepid officers was lost owing probably to the murder of the latter soon after their return to Mooltan.

Detailed accounts of these tribes were given twenty years later by Leitner who succeeded in penetrating the Hunza-Nagir valleys in 1866. A large mass of information on the languages spoken in that area was brought back by him, and he was the first to point out the Aryan affinities of the Dardic language. Leitner also published anthropometric measurements of 12 men, one of whom, Jamshed, who belonged to the Kati tribe of the Red Kaffir was taken to England and measured by Dr. Beddoe. Drew, who for many years served under the Maharājā of Kāshmir as a geologist and finally became the Governor of Ladakh, had an intimate acquaintance with the entire territory from Jammu to Gilgit and greatly added to our knowledge of the tribes inhabiting these regions by the valuable notes contained in his work on *Jammu and Cashmere territories* published in 1875. After Drew, the most important account on these

tribes was by Biddulph, who was a member of the Forsyth's Mission to Kashgar in 1873 and was stationed as Political Agent at Gilgit for several years. Like his predecessors, however, his experience was mainly confined to the Burish and Dardic countries, and he had no first-hand acquaintance with Kaffiristan. The account given by him of the Siah-Posh tribes was derived from Kaffirs whom he met at Chitral, and other visitors to their country. Similarly Bellew's note on the Katis contained in his *Races of Afghanistan* (1880) was not derived from a visit to Kaffiristan, but was based on sources available at Kabul. The first European to enter Kaffiristan was Lockhart who entered the upper part of the Bashgul valley in 1885-86. It is to Roberston, however, who spent nearly a year (1889-90) in Kamdesh and other parts of Kaffiristan that we owe all our hitherto available information regarding the habits and customs of the Red Kaffirs, specially the famous Kam tribe.

Systematic anthropological investigations in the North-western Himālayan regions commenced with Baron Mezö-Kovesd Ujfalvy's visit in 1881, under the auspices of the *Société d' Anthropologie de Paris*, in continuation of his earlier researches in the Pamirs and Russian Turkistan. Ujfalvy spent several months in Ladakh, Balti and Dardistan and published anthropometric measurements of their inhabitants. After him the next important work was that of Stein, who in the course of his three Archæological Expeditions to Central Asia during 1900-1928 measured a large number

of tribes including Red Kaffirs, Khos and Hunza Burushos. In 1912, Dixon travelled through the Astor valley to Hunza-Nagir States on his way to Western Tibet and took measurements on a large number of the Burusho. In the following year, the Italian Expedition to the Karakorm ranges under de Filippi made a detailed survey of the somatic characters of six major racial groups of the Upper Indus valleys. Lastly in 1929, the author as a member of the Scientific Expedition of the Government of India, which was sent to collaborate with Morgenstierne's linguistic survey of the Hindukush regions on behalf of the Norwegian Institute for Comparative Research in Human Culture, visited Chitral and the Rambur and Bumboret valleys of Kaffiristan and carried out an extensive anthropological survey of the races living there.

Linguistically the tribes living in this area have been classified under two heads, namely Dardic and Burushaski, with Kaffiri occupying an intermediate position between Iranian and Indian. Burushaski is spoken in Yasin and the Hunza-Nagir valleys, and is as yet unaffiliated to languages of any known family, though attempts have recently been made by Bleichsteiner (*The Burushaski Language* by D. L. R. Lorimer, 1, Preface, 1935, Oslo) to connect it with Caucasian languages. The group comprises Kashmiri, Shina, Kohistani, Khowar and Kalash; and in Kaffiri are included Kati, Waigeli, Ashkun and Presun. Grierson is inclined to regard the Dardic languages as 'semi-Iranian' forming a link between the

Iranian and the Indian languages spoken on both sides of the Hindukush (*Linguistic Survey of India*, 1, pt. 1, 108, 1927, Calcutta). The researches of Morgenstierne, however, have shown the essentially Indian character of Dardic languages, though, as is natural, in the isolation of the Hindukush region some of the common features of the Ancient Iranian and Indian languages have been preserved which are now lost on the Indian side. Neither is Kaffiri an exception, and though standing somewhat apart it shows much closer affinities to Indian than Iranian languages, in morphology, phonetics and vocabulary, specially with neighbouring Kalash and Khovar, the last two forming a sort of connecting bridge between Kaffiri and the purely Indian languages (*Reports of Linguistic Missions to Afghanistan and North-western India*, 1926 and 1932, Oslo).

It will be well to keep this in mind in considering the racial characters of these tribes and treat the Western Group at first separately from the more Eastern one of the Upper Indus valleys. I am aware that Prof. R. Fisher (*Journ. Roy. Anthr. Inst.*, 66, 57-63, 1936) has shown that the C.R.L. is not a measure of racial difference but a test of significance, and an unsatisfactory one at that. Nevertheless we may begin our discussion with these values without claiming anything more for them than that. If they be not fortuitous, due to the defects inherent in the method, they would give some indication as to the probability of their being random samples of the same popu-

lation, *i.e.*, at their best they may be expected to tell us something of the probable alignments of these tribes.

According to these C.R.L. values, therefore, there is a probability of the four Dardic tribes being random samples of the same population, but in the case of the Red Kaffirs chances are somewhat less. With the extra-Indian groups, whether Iranian or the Turkic, the chances are very little, either with regard to the Dardic or the Kaffir, of belonging to the same population. Leaving them therefore aside, the results may be considered to accord on the whole with linguistic divisions, and *prima facie* there is nothing improbable about them. But beyond this chance membership of a common body we are told nothing about the racial character of that body—whether the somatic type is the same or if there be more than one type, whether their distribution is uniform in the groups composing that body. For this as well as for seeing how far the results obtained by the method of C.R.L. can receive independent corroborations we have to turn to the actual measurements and somatic observations for enlightenment. These may briefly be classed under four main heads, namely, stature, forms of the head and face, and pigmentation.

To take stature first, the differences between the mean values of the Kalash, Kho, Pathan and the Kashmiri are not significant, but the Kaffirs appear to show significant differences with those of the first two, which may not be due to the

errors of random sampling. If we examine closer, it is found that in the Kalash and the Kho the majority of the people vary from a short to medium stature, only 8 and 16 p.c. respectively in these two groups having a stature of over 1,700 mm., *i.e.*, tall. In the case of the Pathan of Dir Kohistan while the percentage of short people is about the same, that of the tall people increases to 22. Among the Red Kaffir, on the other hand, the percentage of short people is only 11 but that of the tall people is 28, *i.e.*, they have a much larger number of taller people among them. Among the Red Kaffir, it would appear that the main range of variation is between 1,650—1,750 mm., while among the Kalash, Kho and Kashmiri it is only between 1,600 and 1,650 mm. The Pāthāns possess a predominatingly short group, but they have, like the Kashmīri, also a smaller number who are inclined to be tall. In other words, the common factor among all these tribes is a short- to medium- statured people which is the dominant element among the Dardic tribes, but among the Kaffirs the tendency of the majority is towards tallness which is shared to a smaller extent by the Pāthāns of Dir Kohistan and the Kashmīris.

It is noticed that the main body of the Kalash falls between 71 and 75, and among the Red Kaffir, Pāthan and Kashmīri it is between 72 and 76, showing that though the Kalash have a relatively narrower head, all the four tribes are essentially

dolichocephalic. On the other hand, the Kho stand somewhat apart, and the distribution of the major type among them is between 76 and 80. There is also a small but perceptible number among them who are markedly brachycephalic. It would appear, therefore, that the greatest common factor among all the groups is dolichocephaly, but the brachycephalic strain which has entered deeply in the Kho is present only to a small extent among the other four.

Turning to the shape of the face, the morphological height in all the groups is over 120 mm., but both the cheek bones and the lower jaw are moderately broad producing in many a pear-shaped and even a squarish type of face. In the majority, however, the facial form is longish and persons with a round face are very small. The difference in the shape of the face is not marked, though on the whole perhaps the Kalash and the Pathan possess a slightly longer face.

The dominant elements in all the tribes lie between 60 and 70, with a small but an appreciable number of very narrow-nosed people specially among the Red Kaffir and the Kho.

There is also a fair number of people who disclose a mesorrhine index, but if the distribution curves be examined it will appear that the majority of these fall within 75, and may not be outside the range of the normal variations of the tribes. The number beyond this figure may perhaps with greater justification be regarded as due to a broader-nosed strain, more specially as

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among some of them the depression of the nasal root, and a rather broad flat nasal bridge were observed.

It is interesting to note that in all the four tribes by far the larger number of persons possess a straight nose. The emphasis laid on hooked nose by Leitner, Biddulph, Ujfalvy and other previous writers, as a characteristic trait of the physiognomy of the people of this region has created the impression as if the prevailing type was so. The observations recorded by me, however, show that the percentage of men with the tip of nose slightly turned down does not exceed 27, and that of the truly hooked nose is not more than 16, in any of the tribe. If the two are combined, then the respective figures for the straight and convex noses would be as follows :—

	Pathan.	Red Kaffir.	Kalash.	Kho.
Straight nose ...	62	72	70	79
Convex nose ...	38	28	30	21

The dominant form among all the four groups would therefore appear to be a straight-nosed leptorrhiny. There is, however, a strain of aquiline-nosed people among both the Pathan and the Kaffir tribes which is less marked among the Khos of the Chitral valley.

There is another character which requires some consideration, namely, the form and shape of the eye. While there is no doubt that the vast majority among all the four groups have horizontal and open round eyes, there is a small percentage whose eyes are slanting and show distinct traces

of the epicanthic fold. The figures for the four tribes are shown in the following table :—

Form of the eye.

Tribe.			Round and horizontal.	Slanting.	Epicanthic fold.
Pathan	..	..	90	10	8
Red Kaffir	..	..	96	4	3
Kalash	..	..	93	7	6
Kho	..	..	86	14	8

It is interesting to note that a small proportion of people also show either complete absence or very slight development of hair on the lips and face. The Kalash disclose 8% of such people, the Kho 6%, the Red Kaffir 3% and the Pathan 2%.

Taking all these factors into consideration therefore, we may regard that among the Western group of tribes living in the valleys of the Hindukush mountains a small (1) Mongoloid strain is unmistakable. It is most noticeable among the Khos and is least marked in Red Kaffirs. Flat, broad nose and short head, whose traces are present throughout in varying proportions, I attribute to this strain. It may also be one of the contributory factors to the lowering of the general stature of the population. The presence of a large proportion of short people must, however, be attributed to (2) another strain which seems to underlie the entire Himalayan population and was probably the primitive element, references to whose occupation of these valleys occur in the traditions of most of the present tribes. I agree

with Prof. Fleure that this is a variant of what Eugen Fischer calls the Oriental type characterized by a long head and an aquiline nose. In addition, (3) it is clear that a tall long-headed strain with straight nose, and another with medium stature, short head and a nose long but also inclined to be straight must be distinguished. The latter is the Pamiric race of Ujfalvy and is undoubtedly a branch of what is commonly known as the Dinaric race of Eastern Europe. Baron von Eickstedt is undoubtedly right in thinking that this race forms the dominant element among the Khos of the Chitral Valley (*Man in India*, VI. pp. 244-45, 1926).

The common elements underlying all the four tribes as disclosed by the values of the C.R.L., I attribute primarily to the second and third racial strains. The comparatively less close association of the Red Kaffirs with the other three groups appears to be due to the predominance of the tall long-headed strain among them which is not quite so marked in the latter. To this extent I think the values of the C.R.L. may be accepted as showing the correct alignment of these tribes, and not fortuitous.

Pigmentation :—Differences in the skin colour of the Hindukush tribes from those inhabiting the plains of India and the presence even of blond individuals among them, have been reported by travellers who visited these difficult valleys. Leitner, who published the measurements of two Red Kaffirs belonging to the Kati tribe, noted the

ruddy skin-colour and hazel eyes of the one and the reddish brown hair and hazel-grey eyes of the other (*Dardistan in 1866 and 1893*, App. 5, pp. 1-6). Similarly, Biddulph remarked (*op. cit.*, p. 128) that the complexion of the Siah Posh tribes, specially the Red Kaffirs of the Hindukush slopes, were very fair. Ujfalvy (*Les Aryens de l'Hindoukouch*, 1896) also spoke of blonds among the Khos of Chitral. Robertson, who had an intimate knowledge of Kaffirstan, observed light eyes and fair hair among Presun children, and considered that about 1% among the Red Kaffirs had red hair (*op. cit.*, p. 170). He was of the opinion, however, that, as a general rule, the Kaffirs were less fair than the upper classes of Chitral (*op. cit.*, p. 169).

Systematic observations on the skin, eye and hair colours of these tribes were first taken by Stein (*Serindia 3*, pp. 1387-88, 1921), who followed the instructions given in the *Notes and Queries on Anthropology*, but did not have any recognized chromatic scale to compare with. The records of his observations are given below :—

Skin colour.

Tribes.	Brown.	Yellowish brown	Rosy white
Kaffir	22	nil	78%
Khos of Chitral	nil.	nil.	100%
Khos of Mastuj	4	4 (?)	93%

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Hair colour.

Tribes.	Black.	Dark brown.	Fair and medium.
Kaffir	17	56	28
Khos of Chitral	5	91	5 (?)
Khos of Mastuj	14	82	4

Eye colour.

Tribes.	Dark (All shades of black and brown).	Medium (Hazel and green).	Light (All shades of blue and grey).
Kaffir	11	61	28
Khos of Chitral .. ..	..	91	9
Khos of Mastuj	14	79	7

According to these figures, therefore, the majority of people among all these tribes have a rosy-white skin colour, dark-brown hair and hazel or green eyes. There are in addition a distinctly blond element with blue and grey-blue eyes and medium to fair hair, and a dark one with brown complexion, black eyes and black hair. Among the Kaffirs both these two strains are well marked, but the Khos appear to be overwhelmingly of rosy-white skin colour, medium eyes and dark-brown hair.

The observations recorded by me on integumentary colours were obtained with the help of the standard scales of von Luschan, Martin and Fischer. As is well known, these scales are neither comprehensive nor quite satisfactory, specially the chromatic scale of von Luschan. Greatest care, however, was taken in matching the different shades in good daylight, and though some of them

were approximations and not of exact correspondence, they have an advantage over visual impressions unchecked by any objective standard.

The results of these observations are summarized in the following table :—

Skin colour.

Tribe.	Dark brown	Brown.	Light brown.	Rosy white.	Sallow white.
Pathan .. ..	..	14	16	70	..
Kalash .. ..	..	6	10	74	10
Kho .. ..	..	5	..	93	3
Red Kaffir ..	2	19	11	63	5

Eye colour.

Tribe.	Black.	Dark brown.	Light brown.	Hazel and green.	Grey-blue and blue.
Pathan	18	44	18	8	12
Kalash	6	26	29	24	15
Kho	2	29	38	20	11
Red Kaffir ..	5	28	33	22	12

Hair colour.

Tribe.	Black.	Dark brown.	Light brown.	Fair.	Red.
Pathan	49	37	11
Kalash	53	17	12
Kho	23	43	32	2	1
Red Kaffir	51	7	7	18	1

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Among the Red Kaffirs 12% among the Kalash 18%, and among the Pathans 3% had grey hair.

It will be seen that while the above figures are in general agreement with the results obtained from Stein's observations regarding the occurrence of a dark, medium and a blond element among these people, the presence of a light-brown strain seems to have escaped his notice. The respective proportions between the various elements require also some modifications, specially his intermediate group of medium-eyed people for which he gives a very high percentage. It is possible that the light-brown and the hazel and greenish eyes were classed together in his medium group, and a sufficient distinction was not made between the light-brown and the truly blond hair. It should also be remembered that Stein's records were made on very small samples, namely 18 Kaffirs, 22 Khos of Chitral and 28 Khos of Mastuj against 100 Red Kaffirs, 90 Khos from Chitral and 150 Khos from Mastuj and upper Chitral observed by me. Percentages based on such small numbers, which can on no account be regarded as representative samples of the populations, are apt to be misleading and must always be taken with reserve.

If now these observations on integumentary colours are considered in the light of the metric data discussed above we may regard the brown strain as due to the Oriental race which seems to be at the basis of the population of the entire region. We have found this element to be strong-

est among the Pāthans where also the darker strain predominates. To the Mongoloid race may probably have to be attributed the light yellowish brown tint in the skin colour and in part also the black hair and dark-brown colour of the iris found in many individuals. The lighter skin, eye, and hair colours appear unmistakably to be due to the rest of the two strains. As the truly blond with sallow white skin, grey-blue eyes and fair hair is comparatively more marked among the two Kaffir tribes, where also the tall long-headed element is conspicuous, the conclusion seems unavoidable that blondness is more associated with this race. A rosy-white skin colour with light-brown hair and medium eyes appears to be the characteristic of the Dinaric type which is dominant among the Khos of the Chitral valleys.

To turn to the Eastern group, the Burusho live in the extremely difficult rugged valleys formed by the western ranges of the Karakoram mountains, north of Gilgit between Latitude N. 36°-37° 10' and Longitude E. 74° 10'-75° 40', in the States of Hunza, Nagir and Yasin, in the last of which a variant form of Burushaski known as the Werchikwar is spoken. The total number of the Burusho of the Hunza and Nagir valleys as recorded in the Census of 1931, is 20,813 and of the Werchikwar-speaking Yasinese 7,518, making a grand total of 28,331 persons (Lorimer, *op. cit.*, pp. 38-47).

Further south-east in the Upper Indus valleys live the Baltis, the Brokpas (the highlander sec-

tion of the Baltis), the Machnopa and the Purigi. Of these the first and the last are now Tibetanized in speech, but the Brokpas and the Machnopas still retain their Dardic languages.

Leitner (*op. cit.*, App. 5, pp. 1-7) was the first to publish measurements on the Burusho of which one was from the Hunza and five from the Nagir valleys. The Hunzikut was a dolicho- and the others were meso-cephals. They were of medium stature excepting Khudayar who was very tall (182 cm.) and had light eyes. The nose was usually straight, but two had slightly aquiline noses. Dixon, who visited the Burushaski country in 1912, measured a series of 92 Burusho of the Hunza valley. Morant has recently published (*Journ. Roy. Anth. Inst.*, 66, 1936) statistical analysis of the measurements taken by Sir Arel Stein on 95 men from the Hunza valley, but unfortunately the value of his constants has been marred by his inclusion of 20 Wakhis in his sample who penetrated in the Herber valley in recent years.

The measurements taken by Dainelli comprise 150 Baltis, 50 Brokpas, 50 Machnopas and 50 Purigis. Now if the individual characters are considered separately it would seem that so far as stature is concerned the main distribution of the Burusho lies between 1,626—1,701 mm., 35% of the people being tall. Among the Dardic group, on the other hand, the main distribution lies between 1590—1690 mm. with a small proportion of the tall (the percentage not exceeding 14 in the case of the Brokpas) but a large per-

centage of the short. Among the Purigi the percentage of the latter is as high as 58, in the Baltis 34, Machnopa 26 and in the Brokpa 22. In other words, the characteristic feature of the Dardic tribes, as was also noticed in the western section, is short to medium stature, the Burusho containing more of the taller element.

With regard to the head form, the mean value of the cephalic index of the 92 Burusho measured by Dixon is $77.45 \pm .26$ and that of the 75 measured by Stein is 79.3. Among Dixon's Burusho 35% were dolicho- and only 14% brachy-cephalic. The main distribution as shown in 7, falls between 75 and 80. The mean cephalic index of the Baltis measured by Dainelli is 75.69, of the Brokpa 75.89, Machnopa 76.92 and Purigi 75.32. The main distribution of the Baltis falls between 74—78, that of the Brokpa 75—79, Machnopa 74—77 and Purigi 72—77. In all these tribes there is an appreciable element of hyper-dolicho-cephals and the dominant type is dolicho-cephalic, the percentages being 64 for the Purigi, 52 for the Balti, 49 for the Brokpa and 42 for Machnopa among whom there is a small (8%) but distinctly brachy-cephalic strain. Compared to the Dardic tribes, therefore, the Burusho are broader headed.

The distribution of the Nasal index of the 5 tribes shows that two distinct types are represented. The leptorrhine type is dominant among the Baltis, Brokpas and the Machnopa, but among the Purigi and the Burusho the prevailing type of nose is broader. The percentage of the platyrrhine, how-

ever, is very small, being only 8 among the Purigi and 12 among the Burusho. On analysing the nasal form it appears that the mesorrhinic index is not due to shorter nasal length but rather to a greater nasal breadth. Among the Baltis, Brokpas and the Machnopa the mean nasal height exceeds 52 mm. and among the Burusho and the Purigi it is 51 mm. The mean nasal breadth, however, centres round 37 mm. in all the tribes.

To turn to the shape of the face, the mean morphological height is 118.06 among the Burusho, 117 among the Balti, 118 among the Brokpa, 117 among the Machnopa and 118 among the Purigi. It is, therefore, considerably shorter than in any of the tribes belonging to the Western group, where the minimum mean height is never below 121 mm. Dainelli did not measure the bizygomatic diameter but judging from his bimalar breadth the shape of the face does not appear to be longish but rather more like that of a pear.

Materials concerning the non-metric characters of these tribes are very scanty, but from figures published by Biasutti (*Spedizione Italiana De Filippi Nell' Himalaia, Caracorum Turchestan Cinese—1913-14*, 9 227-32) it appears that supra-orbital ridges were marked in 78% among the Machnopa, 45% Brokpa, 40% Purigi and in only 20% Balti. In the rest they were either feeble or entirely absent. The nasal bridge is usually prominent but among 23.4% of the Balti, 12% Brokpa and 24% Purigi it tends to be flat.

The figures given for pilosity shows that in

21% of the Balti, 26% Brokpa, 18% Machnopa and 44% Purigi, facial hair is entirely absent, and among an equal proportion it is very moderate.

From all these considerations it would appear that the basic racial type is the same dolichocephalic strain with prominent long nose, which was found to be underlying the population of the Western valleys. Among the tribes of the Upper Indus valleys it is very much stronger, specially among the Machnopa. There is no doubt that among the Burusho also this is the basic type. We may consider, therefore, that this variant of the Oriental race is the dominant strain in the Northwestern Himalayas and may be regarded as the characteristic type of this region. There may also be a more primitive ancient layer of short-headed but mesorrhinic population as Biasutti thinks, but I am inclined to the view that the undoubted Mongoloid strain present in these tribes is responsible for mesorrhiny. Among the Western tribes it appears very probably to be the contributory cause, and if we consider in this connection the prevailing smoothness of the forehead and the scantiness or the entire absence of facial hair in a large portion of the population, it is difficult to doubt that the Mongoloid blood has entered largely among the population. Attention has already been drawn to the fact that the increase in the nasal index observed among many of the individuals in these tribes is due not so much to the shortness of the nasal height as to the increase in the nasal breadth, a characteristic more

observed among the Mongoloid races than among others, and lends further weight to the view of the Mongoloid origin of mesorrhiny seen among an appreciable percentage of these tribes. The closeness of the C.R.L. values between the Dardic tribes, therefore, is to be ascribed to the Oriental element which forms the underlying substratum among these tribes, and to this extent, the probability of all four of them being random samples of the same population may justly be recognized. In addition to these types the Dinaric strain is clearly visible among the Burusho and to a lesser extent among the Dardic tribes, specially the Machnopa. Finally the presence of the tall long-headed leptorrhine strain has also to be admitted in particular among the upper classes though not in such a dominant form as among some of the Western tribes.

Pigmentation.—The skin colour in the Dardic group is in general light brown, but as Drew remarks often light enough for the red to show through it (the *Jammu and the Kashmir Territories*, pp. 423-24, 1875). Rosy-white skin colour and hazel eyes are not infrequent and as Biasutti notes, among the Baltis and the Machnopas an appreciable percentage of people with medium eyes are observed. In one individual belonging to the latter tribe (No. 43 of the Dainelli's list) blue eyes and light chestnut hair was noticed (*op. cit.*, p. 191).

Among the Burusho the skin colour is lighter, and more like that of the Western tribes. As

early as 1880, Biddulph remarked (*op. cit.*, p. 38) that the people in Hunza and Yasin had ruddy complexion and fair and even red hair was not uncommon. The presence of red-haired individuals among the Burusho was also noticed by Ujfalvy (*op. cit.*, 1896, pp. 258-59). Stein's records of the integumentary colours of the Burusho summarized by Morant (*op. cit.*, pp. 35-36) indicate that 94% of the people had rosy-white skin colour, 5% brown and only 1% of yellowish tint. Among 35% of the people the colour of the eye was dark, in 50% medium and in 15% light. In 76% the hair was black but in 24% it was fair.

As in the case of the Western tribes, I would ascribe the darker element to the Oriental and the lighter medium strain to the Dinaric races. The truly fair or the blond element appears more probably to be due to the tall long-headed race as seen in the Kafiri tribes.

From the foregoing review of the data available on the physical characters of the Hindukush tribes the basic racial strain appears to be a variant of the Oriental race discussed before. I was at one time inclined to accept Biasutti's suggestion of a more primitive layer of a short, long-headed mesorrhinic population but a careful survey of the somatic traits of the Western tribes has convinced me that the cause of mesorrhiny is Mongoloid admixture. This seems also to be true in the Eastern valleys. The 'tipo-Dardo' of Biasutti and the 'Dardic type' of Ujfalvy 'with faces like birds of prey and aquiline noses' is not a sepa-

rate strain but only an accentuated form of this basic type. The darker skin colour and black eye and hair are undoubtedly due to this race, though the Mongoloid strain which has certainly entered in the population may also be a contributory cause.

Besides this principal race we have in the North-western Himalayan region the southern extension of the Dinaric race. In its strongest form it is found among the Khos and the Burushos, but it occurs also among the Dardic tribes. If the records of the integumentary colours are considered it is difficult to escape the conclusion that it is essentially a race with medium eyes and hair, but of light skin colour. The large percentage of such people among the Khos and the Burusho is largely due to this type.

It has undoubtedly spread from the Central Asiatic regions around the Taklamakan desert where its presence has been known from the earliest historical times, and among the tribes of the Pamirs it is found in its present form.

The third and the last racial strain is the tall dolichocephalic type with long but straight noses. There is no doubt that it forms a very important layer in the population of the entire region in both the Western and Eastern Dardic tribes. Its presence in the upper classes of the Burusho also is undoubted. Ariëns Kappers has shown (*An Introduction to the Anthropology of the Near East*, pp. 94-125, 1934) after a careful survey of the races of the Aral-Caspian regions that the charac-

teristic of the Caspian or the tall, long-headed race is the clustering round of the main peak around and the values of 72—74 in the distribution curve of the Cephalic index. In the Kaffir tribes of the Hindukush, the Red Kaffir and the Kalash we notice the same tendency. In stature, nasal form and the shape of the face also it is similar to the Aral-Caspian type and closely related to the strain which forms the dominant element in the North European race. Distinction mainly lies in the integumentary colours. Whereas in Sweden the blond type represents 49% of the population and the brunette only 6% the rest being intermediate, among the Kaffirs the former does not exceed 15%. The late Prof. Dixon, whose knowledge of the racial ethnology of the world has not been surpassed, was of the opinion that 'the original skin colour of this tall, long-headed race in the steppe region of Eur-Asia was probably fair with brown hair and hazel eyes but they had inherent in them a strong tendency towards blondness which, whenever the conditions favoured became more and more pronounced, reaching its climax in the Baltic regions' (*The Racial History of Man*, p. 484, 1923). We know that pigment is caused by two or more pair of genes with at least one pair of genes for what are called colour activators. A deficiency mutation will suppress the appearance of pigment producing the condition known as blondness. It is certain that in this race, and as well as at least in another, namely the East-Baltic, this deficiency mutation must have occurred at some time or other.

The association of fair skin with dark hair and eyes in the Oriental race, such as the Badakshis, and of hazel eyes with dark hair, show that the three are not linked characters, but that the deficiency mutations for skin, eye and the hair must have occurred separately. The mutation for depigmentation of the skin colour probably occurred first, then that of the eye and lastly that of the hair. In the Baltic tribes the high rate of the deficiency mutation probably accounts for the large percentage of the blond, but in the Western Himalayas the activators were probably dominant over suppression causing the general persistence of the more pigmented people.

Whatever the explanation be, the blond type is certainly to be attributed to the tall, long-headed race which has almost entirely been eliminated in the tropical plains of India where conditions did not favour its retention, though in the general structure of the head and the body, the Kaffiri are not different from the Punjabi as Eugen Fischer recognized long ago.

In sum, we have three distinct strains in the racial composition of the Hindukush tribes, namely a dark Oriental type forming the basis, a short-headed intermediate, and a tall, long-headed fair race constituting the apex of the population with a certain amount of Mongoloid admixture specially in the Eastern section. The proportions of the three vary in different parts; those of the last two being stronger in the Western valleys whereas the basic Oriental and the Mongoloid being more conspicuous in the Eastern territories drained by the Upper Indus.

NOTES AND NEWS.

The Silver Jubilee Session of the Indian Science Congress was held in Calcutta from the 3rd to the 9th January, 1938, jointly with the British Association which sent a large number of distinguished delegates. Below are given the abstracts of most of the papers read in the Section of Anthropology.

1. *A Plea for a new Outlook in Anthropology.* S. C. Roy, Ranchi.

In this paper the author pleaded for greater attention than has been hitherto paid by Indian anthropologists to the psychological and spiritual (in the widest connotation of the term) side of human culture. Not that the study of other aspects of culture is to be neglected, but the students' interest in them, should, the author thinks, be subordinate and ancillary to his interest in the former.

As the cultural and spiritual side of man constitutes the real essence of humanity and distinguishes Man from the rest of the animal creation, it is fitting and proper that in India, at any rate, the science of Man should be classed apart from Zoology and not as part of it, as the National Institute of Sciences of India has thought fit to class it. The author has pleaded for this line of approach on some previous occasions, but he thinks it will bear repetition as it requires to be stressed. The author treated the subject in its three aspects of scope, method, and aim or goal, and attempted to show how each of these required an extension of outlook.

2. *In how far National or Racial Cultures are distinct from one another.* J. F. BULSARA, Bombay.

People speak and write vaguely about 'Western Civilization' and contrast it with the 'Oriental,' and some speak equally ambiguously of 'Western Materialism' and 'Eastern Spiritualism.' Some also speak of the distinctive cultures and cultural complexes of various lands or peoples, e.g. of the Japanese Spirit, Chinese Civilization, German Kultur and Aryan Origins. To understand this alleged difference of cultures of two arbitrarily demarcated areas of the globe, or of various races or peoples, we have to enter into a deeper analysis of the factors that constitute culture and civilization and view them in relation to the peoples or races that have envolved them. Some of these factors are superficial and some essential, such

as clothing, manners, *etc.* on the one hand, and social and political organizations, *etc.*, on the other.

It may be found that in the superficials of culture there is an apparent wider divergence, while in social organization, status of sexes, individuals and classes also, there are differences but in the more essential factors of social justice, spiritual values and aims and objectives of life, the difference between the so-called Oriental and Western civilizations is not so great. Besides, it is difficult to demarcate geographically, racially or even nationally the areas or peoples who are Eastern in their entire outlook and contents of culture, or are entirely Western.

One great factor that emerges from a deeper analysis is the gradual modernization (*i.e.* the acceptance of ideas that make for efficiency) of the peoples of the world, and also that the ultimate higher values of civilization are getting to be common to all peoples of the world, though some nations may be accepting and assimilating them quickly while others may be doing so more gradually and haltingly. Whether all races of mankind can, in a given period of time and under favourable conditions, assimilate the ultimate higher values of civilization equally with the so-called civilized ones, is a problem worthy of closer scientific investigation.

3. *The Crisis in modern Anthropology.* BARON VON EICKSTEDT, Breslau.

This paper seeks to trace the development of the different trends in Anthropology in various ages and countries and their connection with the main mental situations and movements. The author takes Anthropology only in the sense of biological research in *anthropos* himself, "the only real science of man, races and humanity." A critical observation of the historical development of its notions and methods reveals to him certain logical contradictions and a number of vague applications. They are, the author thinks, the real reasons for the present critical situation in Anthropology "which has the possibility of enormous progress and therefore an enormous spreading of misunderstandings also." The way out of the difficulties is, according to the author, shown by modern 'holistic' anthropology with its logical frame and scientific biological basis.

4. *The Significance of Conrie Shells in Khasi ceremonies.* DAVID ROY, Shillong.

At the crossing of three roads a cowrie shell is thrown on the ground and the name of the person who died far away in foreign lands is called, and the shell is brought home on a piece of white cloth. This shell is placed with the bones and ashes of those who died at home; these remains of the dead are interred under the family tomb-stone—the dolmen which is the ‘Mawbah’ of the family. The significance of this ceremony with the cowrie shell in Khasi life is simple and clear, and no one can dispute the sanctity of its purpose. The dead,—the irrecoverable remains of the dead,—are brought and made immortal in the cowrie shell and the full personality of the dead is there in its entirety.

The use of shells by the Khasis in invoking the spirit of the departed and bringing back that spirit to life seems to signify that the shell is endowed with the power of the giver of life which it simulates.

The Khasis have a working knowledge of the anatomy of the human body and the functions of the various organs. They know that life in its embryonic stage was formed in the uterus, and it is associated with the opening of the portals of life, by which we all enter the world. Perry says that the cowrie shell, as the symbol of fertility and birth, has always been closely associated with women. It was the symbol of maternity. The Khasis say that from woman springs the kind ‘Da ka kynthei iong jaid,’ and speak of man as the giver of the seed, ‘U Kpa uba ai ia ky ryenieng [*lit.*, the father who gives the stature (person).]

In the plants and the seed that they put down to grow they notice that plant-life cannot thrive without water and so, as the Khasis advanced from the food collection to the food production stage, they must have realized the part played by water in the production of life. Thus the cowrie is thrown on the ground and rice is scattered on it and water is sprinkled and the name of the deceased is called. The person of the dead in the halo of its sacredness is represented in the bones and ashes of the dead, and these remains are brought with ceremonial performance to the family dolmen, the *Mawshieng*. In case these remains could not be obtained, the cowrie shell, the rice and the water are used to call back the person, *Rngiw*, and this *Rngiw* in the shell represents the thing in which his person can permeate. Thus the Khasis call back the *Rngiw*, and that spirit from the regions

unseen by the naked eye to a static life of continued existence in a world of fuller realization of the home of true kinship. Man in his *Rngiw* is immortal; this *Rngiw* is born of God and it supported in life by feeding the physical in man, and is revived again by the water of life. The dead, the irrecoverable remains of the dead one, are brought and made immortal in the cowrie shell; and the full person of the dead, the *Rngiw* and its spirit are there in their entirety.

4. *Further discoveries of Palæolithic cultures in the North-West Punjab.* D. SEN, Calcutta.

In this paper the author first outlines the prehistoric geology of the north-west Punjab, and then gives a typological estimate of the palæolithic cultures found in course of his tour there. He has particularly dealt with the lower palæolithic cultures, which are essentially composed of a coup-de-poing industry represented by a variety of forms from primitive to more evolved types. The author thinks that a core-tool-people may have been the early settlers in the plains of the Punjab, having emerged during the closing stages of Siwalik history, and initiated the pebble or core culture with coup-de-poing as their type tool *par excellence*. The flake cultures are also typologically determined. They had a more or less parallel evolution within the core-tool-civilization of the lower palæolithic period, but developed and established as a distinct culture in the middle palæolithic period.

5. *Height and Cephalic index of the Bengali students.* A. N. CHATTERJEE, Calcutta.

On an examination of 9,240 University students above 18 years of age in the following proportions: Brahman—3,017, Vaidyas—716, Kayasthas—2,499, other Hindu castes—2,097, Mohammedans—919—Average Standard. Deiration and percentage distribution of height and cephalic index in the different classes, tabulated district by district (25 tables), the author found that the differences among the different classes in the same district are extremely small:—Brahmans show a tendency to shortness and the distribution of cephalic index variable.

He also notes the effect of urbanization and the extent of Brachycephaly among the Brahmins and the Kayasthas, and variations in districts studied from 10 district maps of Bengal showing distributions of criteria—trends and tendencies—correlation of height and cephalic index.

The following areas are distinguished :—

- (a) of Brachycephaly with tallness in South-Central Bengal,
- (b) of decreasing Brachycephaly with tallness in West-Central Bengal,
- (c) of increasing Dolichcephaly with shortness in—(i) South-West Bengal, (ii) North Bengal, (ii) South-East Bengal.

6. *Anthropological research in Southern India.* LIDIO CIPRIANI, Florence.

In 1934-35, the author carried out anthropological and ethnological investigations in Southern India and Ceylon, particularly in Coorg, Cochin and Travancore. He took anthropometric measurements on 2,323 individuals belonging to 36 castes or groups and collected many samples of hair, numerous ethnographic objects, etc. He has analyzed the somatic features of the Coorgs, Yeruvass and Kurumbas, male and female, and has compared them with the Kadirs, Kanikkars and Uralis.

7. *The Radhiya and the Varendra Brahmins of Bengal.* T. C. RAY CHOUDHURY, Calcutta.

The author discusses the relationship of the two—based on somatometric measurements and physical observations, and thinks that both may be considered as members of the same racial group. Both of them are again compared with the Kanauiya Brahmins and are found to be distinguished from them in important physical characters.

8. *Indian oil presses.* K. P. CHATTOPADHYA, Calcutta.

In an earlier paper, the writer pointed out that primitive oil press is found in Nepal, in association with an early culture in that area. That early culture was characterized by certain special features, which revealed that it reached Nepal from India, prior to the incoming of the Vedic Indo-Aryans.

The oil-press consists of two planks, generally a log sawn in two, fixed to an upright post at one end. The oil seed is introduced between the logs and then pressure is applied by means of a lever. The oil-press is found in Nepal and Assam among non-primitive social groups ; and in Chota Nagpur, the Central Provinces and Madras among primitive tribes. A cruder form of the press is found in Assam and also in the Nicobar Islands.

The different types of oil-mills in India are then described. The South Indian mill has a stone mortar. In Bengal and Gujrat, the oil-mill has a wooden mortar. But in these areas it is often without a hole. Elsewhere, in North India, the mortar has a hole to drain the oil. The terms applied to the mill and certain subcastes in different areas also show some peculiarities. With the exception of the *Tili* in Bengal, the oilmen are generally regarded as socially impure, except in Nepal and Assam.

The possible origin of oil-making by boiling, among a hunting and fishing people is discussed. The possible development of the oil press—by way of the tree-press of Assam and Nicobar—is then indicated. The invention of the oil-mill, following the line of development of a rotary quern from handmills, is next considered.

The writer concludes that the earlier form of the oil-mill in India is the South Indian type with its stone mortar. It has spread from this area to North India.

9. *Polyandry in Kota Society.* DAVID G. MANDELBAUM, Ootacamund.

While a woman may have but one legal spouse, the brothers of the husband have sexual access to her and act as secondary husbands. This fraternal polyandry is founded on a functional principle of the equivalence of brothers. A set of brothers share equally in economic and personal life as well as in the marital sphere. Classificatory brothers and real brothers have uniform rights where non-material phenomena are concerned, but in regard to tangibles, uterine brothers take precedence. When the fraternal principle comes into conflict with another of the major themes of the culture, it is sometimes cancelled, sometimes dominant, depending on its effective rating in the particular situation. Intra-fraternal jealousy is sternly quelled, but the numerous and violent quarrels between brothers about property may be the reverberations of repressed sexual hostility. Despite the inroads of foreign traits, the fraternal principle is still economically valid. Hence polyandry still flourishes.

10. *Clan-monopoly of Personal Names among the Purum Kukis.*
T. C. DAS, Calcutta.

Among the Purums—an Old Kuki tribe of Manipur in Assam—each clan exercises monopoly right over a number of personal names. The members of the clan are required to select names from amongst this group. Infringement of this rule is punished with the levy of a pig and a pot of *Zu* (rice-beer). In the earlier days each clan had a number of fixed names handed down from generation to generation, but at present the number has increased and new names have been added. The clans too have extended their monopolistic right over these new names.

11. *Kinship and Marriage among the Coorgs.* M. B. EMENEAU, Ootacamund.

The Coorgs are organized in exogamous patrilineal sibs. A woman on marriage takes her husband's sib-name, and by a contract which forms part of the wedding ceremony gains right in his sib and loses effective membership in her father's sib. She may regain membership in her father's sib if divorced, and this may happen only if the consent of her father's sib is obtained. A ceremony corresponding to that at marriage must take place in which she renounces membership in her husband's sib. A similar ceremony takes place if, when widowed, she marries a man who does not belong to her first husband's sib. Details of the marriage ceremonies are described. One detail shows clearly that cross-cousin marriage, which is common at present, is regarded as preferable. Cross-cousin marriage is of the symmetrical variety. The kinship terms used by the Coorgs are given and discussed.

12. *On the Anthropology of the Todas.* LIDIO CIPRIANI, Florence.

119 Todas, 61 males and 58 females, were measured by the author at Ootacamund (Nilgiris) in 1935. In his analysis he has considered several combinations of characters together. The two sexes show differences in characters, both qualitative and quantitative, and the author concludes that in the small series, there is a certain Australoid affinity as indicated by tall stature with arms rather short or medium and a short bust; and the women show some negroid features as shown by rather high stature, long arms and short bust. The women also show a larger percentage of dark eyes. The Todas are not therefore a pure type, segregated and unchanged but they have been immune from any recent admixture such as that from the Dinaric type of Coorg.

13. *Racial analysis.* H. J. FLEURE, Manchester.

In analyzing physical characteristics of men we have to remember that almost every population includes contributions from several in-drifts that do not completely blend.

Homo sapiens, with contributions to his characteristics from diverse hominids in various areas, developed his main characteristics in the area of distribution of Chelleo-Acheulian, Aurignacian and Capsian cultures under temperate conditions, probably in N. Africa and S.W. Asia, including early extensions to India. Principal drifts probably include :—

- (a) a drift S. and S.E. from the zone above-named, characterized by a short head of breadth $140-145$ mm., and cephalic index therefore $80 \pm$, nose broad and short, mouth prominent, hair kinky, eyes prominent, stature short frequent steatopygia in women ;
- (b) a drift chiefly S. and S.E. but also N.W. and eventually N.E. with very long head of breadth $140 \pm$ mm., and thus very low cephalic index (usually 73.5 or less), strong brow-ridges and cheek bones in most cases, hair fundamentally wavy, but, when these characters spread into regions with kinky hair, they may take on this character probably by intermixture. Stature moderate. Skeletal characters to some extent like those of Aurignacian men ;
- (c) a large drift in all directions with moderately long head of slightly greater breadth than the above, and cephalic index therefore usually $73.5-78.5$. Hair as *per* (b). Stature moderate to short. Major drifts south of the great mountain zone of northern hemisphere, but later spreads northwards as ice sheets diminished, that to the N.W. (in Europe) becoming depigmented ;
- (d) a drift especially N., but to some extent also S.E. with cephalic index $80+$ because the head is relatively short and has a breadth $150+$. Rounded head contours, broad short face in most cases, rather short nose of moderate breadth, stature rather short. Specializations within (d) gives (d 1) the men with high short heads and prominent noses, and cephalic index most often over 85 , and (d 2) the men with flat-topped broad heads and

cephalic index $85 \pm$ and often sunken noses. Argument can be given for origins of these characters on N. side of the supposed original *Homo sapiens*-zone above-mentioned ;

- (e) What is possibly a special modification of (b) above—a drift out from the steppe in the 'Bronze Age' as dry warmth developed. Very long narrow heads with cephalic indices usually below 73·5, but long narrow faces and prominent narrow noses giving a strong profile perhaps linked but with general growth in length.

It seems highly probable that Mendelian inheritance occurs widely, and this provides an explanation of the undoubted fact of the persistence of these types side by side in a population. It is useful to attempt to analyze samples in the light of the above list of drifts, but dangerous to plead for them as universal standards of reference because they are only inferences and need checking and adjustment. The only safe way is to study the bundling of physical characters in individuals and to see what are the more general bundlings in particular populations. Examples were given and discussed.

14. *Inter-caste differences in blood group distribution in Bengal.*
E. W. E. MACFARLANE, Calcutta.

Blood group data were taken at Budge-Budge, District 24 Parganas, from over 500 Bengalis. The caste and birthplace of each person was recorded. It was found that the percentages of A and B increase from the high to the lowest caste. The Caste-Hindus have over 40% of O. The Depressed Classes show 42·7% of B, which is the highest value for B yet discovered. All groups show the characteristic Indian condition of more B than A. The blood group proportions of the Bengali Mohammedans resemble those of all the local low caste Hindus taken together. This demonstrates that they are descended from local Bengali Hindu converts. There is less difference in blood group distribution between the highest and the lowest castes in Bengal than between high castes and untouchables in Cochin. The reduced Coefficients of Racial Likeness agree with the evidence of blood group data for the Bengali Brahmans, Kayasthas and Pods, also for the Nairs and the Illuvas of Cochin. The fact that the Pods and the Illuvas show an association by the C.R.L. and no resemblance in blood group distributions may be

significant in relation to racial migrations and the time of origin of the B mutation in India.

15. *Studies on the Heredity of Palmar Pattern.* P. C. BISWAS, Calcutta.

This study is based upon the investigation of ten families, consisting of two and three consecutive generations. The main line formulæ, patterns on the hypothenar, thenar and interdigital areas and the occurrence of axial triradii show indications that they transmit hereditarily. Not only that but within families there occur patterns on the hypothenar and thenar eminences which resemble each other not only in their principal characters but even in some of their details.

16. *Tri-clan and marriage classes in Assam.* J. K. BOSE, Calcutta. The importance of tri-clan and marriage-classes has been stressed by anthropologists. But up till now very little field-work has been done on this line in India. In this paper an attempt is made to discuss the different varieties of marriage-classes found in Assam. The materials for the paper in most cases were collected by the author in the course of his field-work amongst the little-known primitive tribes on the Burma border of the Manipur State during the years 1931-1935. The tribes in which this system was recorded are Chirus, Chothes, Purums, Taraos, Kabuis, etc. There is a detailed discussion with diagrams on the working of this system amongst these tribes in the paper.

17. *The Palaungs of the Shan hinterland.* M. R. SAHNI and (Mrs.) SHYAMA SAHNI, Calcutta.

The authors describe the social customs, migration, methods of cultivation and the geographical distribution of the *Palaung* clans and sub-clans inhabiting the Shan plateau. The *Draang* sub-clan, members of which build communal houses after the style of the *Dyaks* of Borneo, are of particular interest. The probable origin of some of the customs is discussed.

18. *Dancing as a method of inducing ecstasy and frenzy.* N. N. SENGUPTA, Lucknow.

Dancing appears as a phase of religious rites. It is also a frequent accompaniment of religious festivals as an æsthetic phenomenon. The present paper is not concerned with either of these

topics. Dancing is sometimes employed as a method of inducing a condition of religious ecstasy. We find it in different parts of the world and in different epochs of history. It is found in what was German Africa, and in Sumatra as a mediumistic phenomenon. It appears in the context of *Shamanism*. It was an important ingredient of the cult of Dionysos in ancient Greece. It manifested itself as a craze in Aix-la-chappelle towards the end of the 14th century. We find it recommended as an efficacious religious procedure in the context of the Chaitanya school of Vaishnavism.

The paper presents an analysis of this phenomenon and proposes a psycho-physical hypothesis for its interpretation.

19. *Comparative Anthropometry of the Pundits and Muhammadans of Kashmir.* H. C. CHAKLADAR, Calcutta.

The writer measured in last May and June, 206 Pundits who are the Brahmans of Kashmir, and also 52 Muhammadans of the same State in which 22 measurements on the head and 30 measurements of the body proportions, and 40 observations were recorded. The Kashmiris were found to be of medium stature and highly dolichocephalic. Their hair is fine in texture. The nose has generally a convex or straight bridge and is often aquiline. Neither the malar bones nor the angles of the lower jaw are prominent. The eye-slit is always straight and of moderate breadth. The colour of the iris was observed to be deep brown and brown, only a negligible fraction having eyes with grey shades. The hair is black in 70 *per cent.* of cases, and the others showed light shades of red. The skin colour is generally tawny white. The vast majority of the Pundits are thin and slender. The Muhammadans show hardly any appreciable difference from the Pundits in any of the features.

The people of Kashmir appear to be of the Mediterranean race, showing less admixture with the brachycephals than even the people of Southern Italy.

20. *Interparietal bone in man.* R. KRISHNA RAO and A. ANANTHANARAYANA AYER, Vizagapatam.

A big interparietal bone, which is usually considered by anatomists as an exceptionally rare and uncommon find, was observed in one of the crania in the Department of Anatomy. This provided an occasion for making a detailed study of this bone with special

reference to its incidence in crania of this part of the country. The study of 194 crania available here in the Department of Anatomy reveals that the percentage of occurrence of this anomaly is 15.46 and that the bone may be single, bipartite, tripartite or quadripartite, the parts however never exceeding the maximum number of four. A brief account of comparative anatomy and ossification has been included in the paper.

21. *An Enquiry into correlations between Stature and Arm-length, etc. between different social and occupational groups of the people of Bengal.* BHUPEDRANATH DATTA, Calcutta.

For this purpose, 190 subjects from 33 groups are chosen and thus divided : Caste-Hindus, Depressed castes, Moslems, Aborigines. Again, these into manual and non-manual classes.

By calculation, it is found that correlation exists between stature and arm-length; the same is the case with hand-length save the manual labouring class. Regarding hand-breadth, positive correlation exists only in 'All-Castes'-group, but negative in stature and hand index. Again, correlation is positive between arm-length and hand-length. As regards arm-length and hand-breadth, correlations exist in 'All-Caste,' 'manual' and 'non-manual' classes. There is no correlation in any group regarding arm-length and hand index.

Then the somatic proportions and ratio expressed in percentage are enquired into.

In conclusion, it is found that the Caste-Hindus are not dissimilar with the depressed castes except for possessing longer hand-breadth and middle-finger-length. But they are taller than the Mohammedans and possess longer hand-length and middle-finger-length.

Again, there is no difference between the depressed castes and the Mohammedans ; and non-manual classes are taller than the manual classes.

22. *The Racial Affinities of the Santal.* S. S. SARKAR, Calcutta.

The author has taken anthropometric measurements of 144 Santals from the interior regions of the Rajmahal Hills and has compared the metric data with those of the Malers of the Rajmahal Hill and the Mundas of Chota Nagpur. After a detailed comparison of the above data the author has come to the conclusion that there appears to be a fundamental difference in the headform and

other somatic characters between the two Munda tribes and the Dravidian-speaking peoples of Chota Nagpur. The Santals appear to possess a strong Australoid strain, in addition to a Mongoloid element, as judged by the presence of the epicanthic fold in their eyes and certain other characteristics.

23. *The Racial Affinity between the Brahuīs and the Dravidians.*
C. R. Roy, Karachi.

The racial history of the Brahuīs is a puzzle to the anthropologist. Suggestion of racial connection with the Dravidians as both speak Dravidian languages is liable to objection on the ground of supposed differences of physical features. Confusion between the Dravidians and the Pre-Dravidians should be avoided. Physical features of the Dravidians indicate that they are akin to the Mediterraneans.

Haddon places the Brahuīs under the Indo-Iranian group. Analysis of the anthropometric measurements of 100 Brahuīs taken by the author shows a large percentage of the Mediterranean element. The original Brahuīs belonged to the Mediterranean stock. They have been modified by the admixture of the *Homo Alpinus* and the Indo-Afghan. But they have retained the original Mediterranean type among the higher classes. Social and marriage customs support the above analysis.

Common physical features point to the common origin of the Mediterranean, Brahuīs and Dravidians. Dravidians entered India through the N.W. Frontier. Their possible route of migration. Type II Mohenjodaro skulls as described by Dr. Guha confirms the theory of the Mediterranean migration about 2000 B.C. Relics exist of common material culture. A characteristic type of basket found is among both. Language, physical features and material culture all point to the racial connection between the Brahuīs and the Dravidians.

24. *Rudra-Shiva as an agriculture deity.* NANIMADHAB CHAUDHURI,
Calcutta.

Shiva appears as a cultivator-god and a half-mad mendicant god of the lower classes in medieval Bengali literature. In Brahmanical society at the present time *Shiva* is specially worshipped as a Mahadeva and under other names for the protection of cattle, reco-

very from illness, as a guardian deity of village and gate-keeper. Animal and other sacrifices are offered to him for good crops. In the Rig Veda, *Rudra* has no agricultural aspect. In the later Vedas, Brahmanas and Sutras *Rudra* appears as a vagabond god of outcastes and skin-cloth forest and hill tribes, an inauspicious, malevolent god, a protector of cattle and a god connect with vegetation. In the Epic Age *Rudra Shiva's* old attributes continue and new attributes are added. The old connection with vegetation develops into connection with food and agriculture, the means of producing food. The old vagabond god of outcastes is transformed by the addition of such attributes as 'crazy,' 'mendicant,' 'clothed in rags,' 'fond of dancing, singing and laughing,' etc. The dual aspects of the medieval Bengal *Civa* have thus been derived from earlier traditions.

25. *A Preliminary Study on the Brisakastha of Bengal.* B. K. CHAUDHURI, Calcutta.

Brisakastha is the vedic *yupa* transformed. Origin of the vedic *yupa*. Evidences proving the existence of animal sacrifice (specially bull and cow) to the departed ancestors in the Vedic and post-Vedic periods. Provisional classification and description of the *Brisakastha* of modern Bengal. Possible interpretations of the figures carved on it. Method of disposal of the post and the underlying psychological concept discussed. Magical ideas associated with it pointed out. Distribution of the *Brisakastha*. Its use as a memorial post, and as a post of worshipping the departed ancestors. Traces of the conception of fertility cult as found along with it.

26. *The Development of the head among the Bengalis.* T. C. RAY CHAUDHURY and R. N. BASU, Calcutta.

The authors study the length, the breadth, the horizontal circumference of the head and the cephalic index in a developmental series of subjects from the age 17 to age 24 and show that so far as the head characters are concerned, the Bengali students attain their maximum development at the age of 19.

27. *Language as an aid and obstacle to accurate thinking.* J. F. BULSARA, Bombay.

Since man is essentially a social animal, language arises as an

inevitable social necessity at an early stage of human evolution. It is used as an instrument of communication of thought, feeling and ideas, and as such is helpful in developing thinking, expressing feelings, exchanging ideas among members or groups who are acquainted with the meanings of the socially adopted linguistic symbols.

The earlier content of language is concrete and the syntax simpler as is exemplified in the linguistic evolution of the child-mind, but the necessity of expressing and explaining more complicated ideas, and the need of symbolizing abstract notions, of specifying groups, *etc.* by single linguistic symbols is also felt at a fairly stage of social development. Thus language grows and in turn helps to clarify emotions, thoughts and ideas and communicate them to fellowmen who understand the symbols adopted by the group. Mind begins to expand, and in individual thinking and mutual talk or conversation linguistic symbols take on various shades of meaning or contents under different contexts of situations.

Thus language is partly affected and influenced by the behaviour, experience and culture of the particular society in which it has habitation and is social product, imbibing in its structure the thought and behaviour patterns of the group in which it develops. The defects of logic and reasoning, the imperfect notions about the various aspects of nature and inaccuracies about nature of objects and phenomena gradually evolves to greater and greater precision as the experience and knowledge of the community increases.

The above can be exemplified not only from the language of children and from the language store of simpler peoples, but also from the linguistic habits of the less literate or developed section of an otherwise enlightened community.

A great part of our linguistic behaviour is a matter of habit, and even in an otherwise scientifically-minded community or group, language symbols are used loosely, vaguely or ambiguously. Metaphysics, logic, philosophy, and lastly science have largely been modifying the social usage of language from time to time.

These aspects of looseness, indefiniteness, emotional *affect* and inaccurate implication in the use of language symbols can be easily illustrated in such words as deity, God, spirit, sovereignty, religion, communism, imperialism, *etc.*

A large part of loose thinking and even inaccurate and unscientific representation in society is due to our linguistic habits and loose language symbols. This defect can only be removed by a greater study of our linguistic behaviour and a deeper analysis of the structure of language and greater care in the use of complex symbols round which have gathered from time to time the emotional re-action of the users and the 'social history' of the community.

28. *Colour-preferences of the Santals.* R. K. MONDAL and M. N. BASU, Calcutta.

Experiments were made on hundred adult male Santals of the Santal Parganas for determining the relative affective value of colour impressions. In the experiments seven colour papers were taken, namely, violet, indigo, blue, green, yellow, orange, and red. Testing the colour impressions of the Santals it is found that they have a preference for red. Experiments were made on two other groups of people of India and the results compared. With the present knowledge of psychology racial colour preferences possibly suggest that there may be some inherent psycho-physical differences between the different races of the world.

29. *The marriage and nishpat customs of the Rishis.* N. DATTA MAJUMDAR, Calcutta.

The 'Rishis' or 'Rishiputras' are the leather-dressing and cobler caste of Bengal. In this paper, a study has been made of the Rishis of Shahapur (population 1686), a village in the south-east corner of the district of Mymensingh. In the matter of marriage the ordinary rules as to prohibited degrees are followed, and a price has to be paid for the bride.

Widows are not allowed to marry. But the purpose of widow remarriage is served by a peculiar custom known as '*nishpat*' whereby a man employs a widow as a maid-servant, and lives with her as husband and wife without undergoing any ceremony whatsoever. Children born of such an union are not regarded as illegitimate. *Nishpat* sons are entitled to inheritance along with sons of regular marriage, the former getting a share of $\frac{2}{3}$ ths while the latter $\frac{1}{3}$ ths. But the former are esteemed lower in social status than the latter, and are not allowed to sit in the same line with them in social feasts.

The 'nishpat' custom seems to be in an intermediate position between pure and simple concubinage and widow remarriage. The word 'nishpat' is probably derived from the Sanskrit word *nishpati* which may be disjoined as 'ni' plus 'pati' that is, one who is without a husband.

30. *On an Improved Model of the Profiloscope.* P. C. MAHALANOBIS, Calcutta.

A photographic profiloscope designed by the author was described in previous communications to the Indian Science Congress in 1933 and 1936. The accuracy attained in profile measurements on photographs taken with this instrument was discussed in a paper published in *Sankhya*, Vol. 3, Part 1 (March 1937).

Further improvements have been made to ensure greater accuracy in seating the subjects in the same standard position. The improved model and photographs taken with it will be exhibited.

31. *Marriage Ceremonies of the Primitive Tribes of Travancore.* L. A. KRISHA IYER, Trivandrum.

Marriage ceremonies are common in the savage world. The purposes of their performance are manifold and form a very fascinating study. The joining of hands is found among many savage tribes. It is the outward sign of a troth that the two persons give to each other. Very frequently it is an act of union. Another wide-spread rite is to eat together. The bridegroom gives a ball of rice to the bride who in turn gives one which he eats. Mutual partaking of food is the strongest of all ties and breaks the most important of taboos that are prevalent against eating together. Exchange of betelnuts is another custom found among the Malayarayans. The bride gives one half to her lover and chews the other half. They spit in the same spittoon. This consummates marriage. The presentation of a bamboo comb to the bride forms the essential part of the ceremony among the Muthuvans. Another rite is the custom of throwing of some kinds of cereals and dried fruit on the couple. It is intended to give food to the evil spirits to induce them to be propitious and depart. Evils are averted from bride and bridegroom not only by positive rites, but also by abstinences of various kinds.

32. *A prehistoric Site within the City of Madras.* M. D. RAGHAVAN, Madras.

In and about the city of Madras are a number of interesting prehistoric sites which await excavation. Practically at the western extremity of the city lies one such site now included in the garden of a house named 'Fontenoy.' From time to time Mr. E. Prudhomme, the owner of the property, during the course of building operations had unearthed antique pottery including big-sized urns. On his invitation, Mr. Cammiade had inspected the site. His retirement and departure from India prevented a close study being made of it. In August 1934, permission was obtained from the owner by Mr. T. G. Aravamuthan and the author, on behalf of the Madras Museum to examine and excavate the site.

The site proved to be of more than ordinary interest, not the least remarkable of its features being the great variety of pottery forms met with, the site being closely packed with bowls and pots of black-tipped ware, specimens of black pottery, large urns of coarse clay and big-sized sarcophagi of the Perumbair type. Among the unique forms in pottery are specimens of all black bowls with each a pointed end, recalling the shape of a half cocoanut with its sharp terminal, a goblet and a censer with fluted stem. The urns fall into three classes—the usual type of large wide-mouthed pyriform urns with the bottom cut flat, such as those found at Adichanallur and perumbair; the less frequent type with the high neck and mushroom shaped body, and the elongated form with globular body ending in a short stem. Certain of the objects found are highly suggestive of the early Iron Age such as a hoe blade in iron of primitive type and a thick rod of iron. Among other antiquities are a hallow pottery bead and a well-made figurine of black pottery in the form of a bird, which possibly are of nature of votive offerings. Fragmentary pieces of bones found in one of the pots indicate that the people practised what is known as the secondary burial, in which the body after a preliminary burial was exhumed, and a selection of bones given a ceremonial interment in cists or sarcophagi with elaborate ceremonials, votive offerings and offerings of food—an extension of the culture discovered in the sites in the neighbouring district, at Pallavaram and Perumbair.

The site was no doubt the burial ground of a settlement of great antiquity which lay in its vicinity, vestiges of which have been collected from the site occupied until a few years ago by the

Government brick-fields, extending into the property called Landon's Garden to the north of it. The full extent of the burial site could not be ascertained as the neighbouring areas have been largely built over.

The surface soil is sandy clay, which deeper down changed to the river sand variety. The moisture-laden sand was not conducive to the preservation of pottery which softened and fractured, aggravated by the roots of the trees growing on the site.

33. *The Coining Technique of the Yaudhyas.* B. SAHNI, Lucknow.

In this paper the author described the technique of coining employed in the ancient mints of Yeudheya republic (circa 100 B.C.) at Rohtak, about 40 miles west of Delhi. The author thinks that it may be one of the few sites in India that have been in occupation, off and on, since the prehistoric Sind Valley period.

34. *The Nal Pottery.* N. G. MAJUMDAR, Calcutta.

In this paper the author indicates briefly the position in order of sequence of certain polychrome vases with geometric patterns reminiscent of the now-famous Nal pottery, which he excavated during his archæological explorations in Western Sind in 1929-30.

INDIAN ETHNOGY IN CURRENT PERIODICAL LITERATURE.

The *Journal of Royal Anthropological Institute* for January—June 1937, contains Dr. H. S. Harrison's Presidential Address on "Ethnology under Glass," in which the methods of arranging exhibits in museum exhibition-cases are discussed, and the comparative advantages and disadvantages of the two alternatives of the geographical (or ethnographical) and the comparative (or ethnological) methods are touched upon, and the hope is expressed of the future foundation of a large National Museum of Anthropology in London in which both the systems will be employed.

In the same number of *J. R. A. I.*, Mr. H. N. C. Stevenson describes and analyses the "Feasting and Meat Division among the Zahau Chins of Burma" which he personally witnessed. After describing the social setting of the feast and the method of carving and distribution of meat, he analyses the functions of feasting and ceremonial division of flesh in Chin society. He finds that "the patrilineal relatives and the affinal relations are bound with a closely knit system of reciprocities to the feast-giver, and that in addition, the headman, the blacksmith, and other persons rendering service of some kind or another are included in a wider circle of mutual obligations which envelopes the whole community." In all these reciprocities the giving of meat is an integral part which figures in the kinship, the social, the poli-

tical, and even in the religious obligations. With this ceremonial division of meat is connected the *lefa* system which is a form of adoption by which a man in need of material wealth for purposes of marriage, etc., can borrow it from a rich man if his own relatives are too poor or unwilling to give him a helping hand. "The debtor's heirs pay back his debts at the expense of their patrilineal relatives, who deserve this fate because of their inability or disinclination to assist their kinsman at the time of his distress."

In *Man* for January, 1938, Mr. C. C. Das Gupta reports the occurrence of a recent instance of human sacrifice (a Muhammadan victim) offered by a man of the Savara tribe of the Patna State in Orissa, to a stone-image (an ordinary conical stone besmeared with vermilion) of the goddess *Chandi*. It is not improbable that *Chandi* was in origin an aboriginal deity or spirit. Among some of the aboriginal tribes of Chotā Nagpur, *Chāṇḍi* is an indigenous spirit who presides over hunting and war. Among the Mūṇḍās and the Orāoṇs, this spirit is represented by a stone over which the blood of a sacrificed animal or fowl is sprinkled—(See the *Oraons of Chotā Nagpur*, pp. 221-221, 224-8, 235, 239-231; *Oraon Religion and Customs* pp. 60-65. *The Mundas and their Country*, p. 527; *The Birhors*, pp. 298-9).

In *Man* for February, 1936, Lt. Col. D. H. Gordon in an article on "The Microlithic Industries of India," gives a list of microlithic sites in Bihar; Orissa; Bombay Presidency including Guzerat, Sind, Kutch and Kathiawar; Bundelkhand;

Baghelkhand; the United Provinces (Jhansi, Mirzapur and Banda, and the rock shelters of the Kaimur Range); the Central Provinces; Hyderabad State; and Madras Presidency (Anantpur, Cuddapah, and Kurnool districts). The Central Indian industry in particular displays a wide range of types including crescents, triangles, trapezes (very rare), crescentic blades, straight blades (pointed and unpointed), disc-scrapers and end-scrapers, worked points, borers, and cores.

The Quarterly Journal of the Mythic Society for January, 1938. contains a study of "The Vedic Ritual of Marriage" by N. V. Venkatesam Pantulu. A tabular list of the marriage ritual and *Mantras* as prescribed variously by the *Atharva Veda*, the *Sama Veda*, the *Sukla Yajur Veda*, and the *Krishna Yajur Veda*, and the *Rig Veda* is given. According to the author, a critical comparison of the marriage ritual indicates that the *Atharva Veda* was the first in the order of evolution of the *Vedic mantras* and rituals, the second in order is the *Sama Veda*, and the third the *Sukla* and *Krishna Yajur Vedas*, and that "the whole Vedic literature must have been rounded off in the *Rig Veda*."

In *Science and Culture*, Mr. Bains Prashad, contributes an interesting article on "the Bearing of the Domestication of Animals on Human Civilization, with particular reference to India." The author thinks that in view of the recent discoveries regarding the domestic animals of the Indus

Valley Civilization it would not be far wrong to consider India as having been a very important, if not the sole, centre for the domestication not only of the buffalo, but also the dog, the cat, the sheep, the goat, and the camel.

In *Indian Culture* for January, 1938, Dr. O. Stein contributes an article on "India between the Cultures," in which the author maintains that the position of India between the Cultures [of the ancient West and the ancient East] can be best described by the word "*dharmavijaya*." "India's relations towards West and East was never defiled by waging wars for material gain and only self-defence forced the weapon in her hands. Thus she won her victory in accordance with the command of *dharmma*, be it religion, be it morality, call it culture or humanity. That is the importance of India's role in the history in which a place hardly shared by any other country belongs to her, from the remote past up to this day, that is her unique and noble position between the culture"

In the *Indian Historical Quarterly* for December, 1937, Mr. Himansu Bhusan Sarkar contributes an article on "The Cultural Contact of Java and Bengal," and Mr. Binayak Misra on "Folklore and Pauranic Tradition of god Jagannātha."

In the *Journal of Indian History* for December, 1937, Rev. H. Heras describes "The Longest MahenjoDaro Epigraph," and Mr. D. S. Trivedi contributes a paper on "The Mahābhārata War" which, according to him, was fought in 3137 B. C.

The *Annals of the Bhandarkar Research Institute*, 1938, publishes an address by His Holiness

Dr. Kurtkuti (Shri Shankarācharya) on the influence of the Mahābhārata on Hindu Social Life," Prof. M. Hirianna writes on "The Indian conception of Values," and Dr. S. M. Katre on the "Formation of Konkani."

In the *Journal of the Bihar and Orissa Research Society*, for September 1937, Mr. S. C. Mitra contributes a "Note on the Godling Kāsi Babā among the Binds of Bihār."

In the *Journal of the United Provinces Historical Society* for December, 1937, Mr. Hari Deb Pradhan contributes a paper on "Social Economy in the Tarai (The Thārus)."

In the *Journal of the Benares Hindu University*, Vol II, no. 1, Rev. H. Heras contributes two articles, one on "The Story of Mahenjo-Daro Signs," and another on "The Origin of Mahenjo-Darians," and Mr. Bhagwat Saran Upadhyā, gives an interesting account of "Social India as depicted by Kalidāsa."

The February number of the *New Review* contains an article on *The Importance of Anthropological Studies in India* by Sarat Chandra Roy; and the March number of the same Journal contains the first instalment of an article on "The Āryans in their Homeland" by Rev. H. Heras, in which the ancient Āryan family and clan are briefly described.

NOTICES OF BOOKS.

Anthropology : Physical.

An Introduction to Physical Anthropology. By E. P. Stibbe. With an Appendix by W. A. M. Start. (Edward Arnold & Co., second edition, 1938). Pp. 230. 10s. 6d.

We do not know of a better elementary textbook of Physical Anthropology than this well got-up volume, written in an easy and lucid style. An introductory chapter briefly indicating the scope and method of Physical Anthropology is followed successively by four Parts dealing respectively with Comparative Anatomy (of the Man-like Apes and Man), Palæontology (anatomy of fossil man), Anthropomorphy (classification and distribution of living man and the methods of Anthropometry), and Practical Methods. An Appendix on the Statistical Examination of Anthropometric Data, a Glossary of Technical Terms and an Index complete the volume. We strongly recommend the book to beginners in the study of Physical Anthropology.

Anthropology : Cultural.

Totemica: A Supplement to Totemism and Exogamy. By Sir James G. Frazer, (Macmillan, 1937) Pp. xii + 518. 25s. net.

This supplementary volume brings the author's classical volumes on "Totemism and Exogamy" up to date. It is a summary of the principal results of the researches of scholars in various parts of the

world since the publication in 1910 of the last volume of the author's standard classics on the subject. The new material is arranged geographically and presented with the lucidity and perspicuity characteristic of the author. Naturally Australia with its varied primitive types of totemic institutions and beliefs and the comparative abundance of new information regarding totemism in that continent has come in for the largest share of attention. The distinguished author's work on 'Totemism,' alone, even if he had not enriched anthropological literature, as he has done, with a number of other works of equal importance and value, would have made his name immortal in the realm of anthropological and sociological literature.

Savage Civilisation. By Tom Harrison (Gollancz, 1937). Pp. 467.

In this book the author has attempted a brief outline of tribal life in north-west Malekula in the New Hebrides Islands in a popular narrative style. An account of successive contacts of the black islanders with white peoples from the west and the mental impacts on the former is also attempted. The New Hebrideans are reputed to be among the most primitive of the Melanesians. In the New Hebrides, however, there has been no wide uniformity of culture, though one broad pattern of feeling, of agriculture, stone adges, masculine war, the fear of dissatisfied death, the aspiration to climb higher in rank, belief in a kindly Creator, may be found in all. There are many

tribes and several dialects and distinctions, some tracing descent from the mother, others from the father, some practising deformation of the skull, and some making elaborate effigies of the dead. Different methods of burial are practised; their houses though all built on stones are round-shaped in some tribes, long houses in some, and straight houses in other tribes. The book gives the reader a fair insight into Indonesian life and culture in the New Hebrides.

Religion and Social Organization in Central Polynesia. By R. W. Williamson, edited by Ralph Piddington. With a Preface by Dr. Raymond Firth. (Cambridge University Press, 1937) Pp. xxx + 340. 25s. net.

This is a continuation of the late Mr. R. W. Williamson's well-known works *The Social and Political Systems of Central Polynesia* and *Religious and Cosmic Beliefs of Central Polynesia*. The editor, Dr. Piddington, has not only collated, arranged and edited the valuable posthumous material left by the late lamented author but has interwoven into it valuable new material that has accumulated since Williamson's collection of references was completed, and has presented the facts in the light of the newly evolved functional method which lays particular stress on the inter-relationship existing between different groups of ethnographic facts. In this book, the essential interpenetration of Polynesian religion into other aspects of Polynesian life,—social organization, economic institutions, law and politics and morals,—

and its supremely practical value are clearly brought out. The religious system of Central Polynesia is shown to have been "an active cultural force of profound significance, binding together social groups, co-ordinating their activities, and providing a spiritual back-ground for every phase of social life."

A Tribe in Transition. A Study in Culture Pattern. By Dr. D. N. Majumdar, (Longmans, 1937) Pp. xi+216. 10s. 6d. *net.*

In this book we have for the first time a systematic account of the group-life of one of the principal Munda-speaking tribes—the *Ho* of Chotanagpur. The book opens with an introduction in which the author discusses recent developments in anthropological method, particularly the functional method connected with the names of Malinowski and Radcliffe-Brown and the culture-pattern method which the author characterises as 'the beginning of a Gestalt Anthropology; and of which Ruth Benedict is the chief exponent. The author says that a synthesis of these two approaches has been his ideal, and that he has "attempted in this volume to give a general description of the Munda cultural pattern not only as a closed group but also as an open one willing to change under pressure of alien influences but not violently departing from its norms." After three brief chapters dealing respectively with the 'Environment', 'The Historical Background' and 'Character and Attitudes,' he briefly describes different aspects of the economic, social, and cere-

monial life of the Hos, in nineteen short chapters (we wish they had been longer), and winds up with a comparatively long chapter on 'Cultural Contact and Adaptation.' Three Appendices (respectively on Education, Origin of Clans, and Weekly Markets) and an Index complete the volume. In the chapter on 'Cultural Contact and Adaptation,' the author has briefly discussed the effects of various cultural contacts, those of the Hindus of the higher as also of the lower castes and 'depressed classes' and other tribal neighbours, of the European and Indian administrative and judicial officers and of the exotic system of administration, the influences of life in and contact with factories, mining centres and tea-plantations, and those of the Christian missions as also of the various instruments of civilization such as schools, fairs and markets, the dispensaries, traders, railways and public roads, and last but not the least the ubiquitous excise-shop.

The author appears to have perceived the defect in the treatment of the 'functionalists' who seek to describe the function that a particular institution or trait plays in the culture as a whole without at first fully describing the integrated culture which alone gives a meaning to any particular institution. Dr. Majumdar has rightly given a concise account of the various aspects of Ho culture and its past and present contacts while briefly referring to their inter-relations and the changes they have been undergoing without considerable violence to the cultural norm. Later he may think of usefully dealing in detail with some selected institution of the tribe in the orthodox manner of the functionalists.

The account of Ho customs and beliefs given in this book is well-written in simple and clear language and appears to be in general fairly accurate, and the inferences drawn by the author are on the whole probable. With regard to one of his inferences, however, a word of comment may not be amiss. While his inferences regarding the origin and connotation of the term 'buru' would appear to be reasonable, I am not sure about the extended connotation which the author gives to the word 'Bonga' as "a power, a very big power which pervades all space, as it were," "which gives life to all animals and plants, encourages growth in plants, brings rain, storm, hail, floods and cold," and "like the Polynesian *Mana*, kills and destroys evils, stops epidemics, cures disease, gives current to rivers, venom to snakes and strength to wolves," and is "not only a power." The author goes further and says, "From this belief in power, the Hos regard every phenomenon in nature and its manifestation, and trace everything to the presence of a *Bonga*. They carry the idea further to explain all the evil done by men, by the evil eye and the evil tongue, the activities of witches and sorcerers, and call every maleficent or beneficent deity, *Bonga*, *Bonga*. therefore, means only a power, a source of all power as it were. A hierarchy of power is also recognised, with the Sun at the head and a number of lesser powers, such as the Moon, the Marangburu, &c..., ranged in order of their traditional prestige, influenced to a certain extent by their experiences. But this conception is not essential to *Bongaism* proper, it is something which has evolved in the course of their association with the different manifestations of this power...What was only a vague and mysterious power became identified later on with the thing, or object, from which it derived its name. Thus we find to-day that the word *Bonga* is popularly used to mean the object with which it is associated, as if the thing itself was the power. The seat of the power was identified with the power itself, and thus the mountain became a *Bonga*, the sun became the Supreme Being, the river was taken as the *Nāgā-bonga*.

The idolatry of their Hindu neighbours might have served as the impetus to this mental change among the Hos, and their attempts to realise the abstract in the concrete manifested themselves in the conception of the different sizes and forms of Bongas." (p. 134). Again, "A Ho recognises the existence of a world of Bongas, but this world is not away from his own, and he realises the presence of this world in his everyday life, though he cannot express this association in terms of space, distance, height or depth. When a Ho dies, he goes to this world, he is 'bongaia,' to die is 'bongai jana,' to live is 'menaia.' It is not a transformation or a metamorphosis, it is only a reversion, a union with the world of which it was a part, a fraction of Bonga. The power which we have called *Bonga* is possessed by every individual, every animal, every plant, every stream, rivulet, tank, rock, tree, forest, field and mountain, is possessed in greater or lesser degree by man, which gives him his power over, or makes him submit to, others. When a man possesses a personality and wields authority over others, he is a *Bongalekan*, i.e., a man like a Bonga, an old, great or in any way respectable man." (p. 133)

Again, "They believe that the vitalising force which they know as Bonga enters into every being and every thing, endowing it with a life-substance, or the life essence necessary to its existence or function" (p. 140). I am afraid the author has credited the primitive Ho (whatever may be the case with educated or semi-educated Hos who have come under Hindu or Christian influence) with a notion of causality more or less alien to the primitive consciousness. According to our author the abstract idea of an immanent power "pervading all space" preceded in the Ho's consciousness the concrete idea of power (represented by the sun, the mountain, the torrent, etc.). But we should think that it was the Sun or the mountain itself that came to be regarded as a '*bonga*,' long before the

idea of a 'bonga' *residing* in the Sun or the mountain emerged. Whereas the notion of 'mana' is that of an impersonal, intangible force, the conception of 'bonga' in the Ho's mind appears to have been always connected with a concrete spirit, and in his ancient myths as in his present-day dreams and visions 'bongas' always appear as individual or personal spirits. Dr. Majumdar has perhaps been misled by a confusion between the expressions 'bongaia' and 'bāngaia.' When a man dies, the term used of him is not 'bongaia' (as Dr. Majumdar thinks) but 'bāngaia' ('he is no more' from root 'bang,' 'bāno,' to be absent, to cease to be); to die is not 'bongai jana' (as Dr. Majumdar thinks) but 'bāngai yana' (from root 'bāng,' 'bāno,' as opposed to 'menā,' to exist). To make sure whether the author's theory of 'Bongaism' is correct or not, I read and explained some of these and similar passages from the book to a few Hos (school-boys of advanced age and their elders) and found that the author's view of the 'Bonga' concept was too high for them. When I read and explained to them the further passage (p. 141),—"The ancestral spirits form a segment of the great power which they conceive as Bonga, and after death, the soul of the deceased unites with this power, losing itself in it," they wondered and said, "Should the ancestor-spirits be lost (merged) in the Supreme Spirit, why should we offer sacrifices and libations to them as to separate *Bongas*?"

Apart from this, as I have already said, the inferences drawn by the author appear to be, on the whole, probable and his statements of facts are lucid and

fairly accurate. The book is undoubtedly a valuable contribution to Indian ethnographical literature.

The Negritos of Malaya. By Ivor H. N. Evans (Cambridge University Press, 1937) pp. xiii+323. 25s. net.

Of the three 'pagan' racial divisions that inhabit the Malay Peninsula,—the Proto-Malay Jakuns in the south; the wavy-haired dolichocephalic Sakai on the main range, generally regarded as 'Proto-Australoid' or 'Pre-Dravidian' akin to the Veddahs of Ceylon but, according to our author, rather allied to the "Indonesian" tribes of French Indo-China; and the Negritos on the north, more commonly known as the Semang (and in the east Pagan) but whom our author prefers to call simply "Negritos." There are many groups of mixed origin, occasionally including all these three elements. It is the Negritos (Semangs) in particular that are chiefly dealt with in this volume. They are neither mountaineers nor even hillmen but prefer river-valleys, at the most foot-hills, formerly even coast-lands. Owing to these preferences, as the country has become settled by Malays and Chinese, the Negritos have come into relations with them and have tended to become economically servile to them owing to their desire for articles which they cannot make or obtain otherwise than from outsiders. The Negrito is a hunter and collector, with the simplest social organization without either totemism or clan-exogamy or the classificatory system of relationships. When a divorce takes place, the mother has the custody of the children. Poly-

gamy is not unknown. The mother-in-law taboo, however, is very strictly observed, and marriage between first cousins and nearer relatives is also tabooed. The blow-pipe, presumably borrowed from the Sakai, has supplanted the older use of the simple bow-and-arrow; the poisoning of arrows and darts is practised; the older sawing method of producing fire is now supplanted by the flint-and-steel method. Burial is the usual method of disposal of the dead. A bull-roarer, called the ghosts' Jews'-harp, usually a children's toy, is buried with the dead. The usual custom when a man dies, is to move camp a little distance immediately and then, again—further off—after a singing performance which assists the migration to the other world. The book is packed with valuable information. As an authoritative up-to-date account of an interesting people, the book is a valuable addition to ethnographical literature.

The Mandæans of Iraq and Iran: Their Cults, Custom, Magic, Legends and Folklore. By E. S. Drower (Oxford University Press, 1937) Pp. xxv+436. 25s.

The Mandæans, also known as Subba (sing. *Subbi*) are an ancient religious sect akin to the Gnostic Christians of the second and third centuries. From their frequent immersions and the reverence paid by them to St. John, the Baptist, led the earlier Christian Missionaries to call them "Christians of St. John," but as a matter of fact, they are neither Christians nor followers of John the Baptist, though they regard John as

an adept, skilled in the white magic of the priests and concerned largely with healing of man's bodies as well as their souls. It is a mistake to call them 'star-worshippers,' for they do not adore the heavenly bodies but believe that stars and planets contain animating principles, spirits subservient and obedient to Melkad Nuhra (the King of Light), and the lives of men are governed by their influences. With these controlling spirits are their doubles of darkness. The Mandaeans invoke the spirits of light only, not those of darkness. Mandaean ritual meals and many other rites and cults are nearer in essentials to some Iranian originals than to primitive Christianity. The core or nucleus of Mandaean religion, through all borrowings adaptations, vicissitudes and changes, is the ancient worship of the principles of life and fertility. The Great Life is a personification of the creative and sustaining force of the universe. The symbol of the Great Life is 'living water,' that is flowing water, or *yardna*. In the ethical system of the Mandaeans, as in that of Zoroastrians, cleanliness, health of body, and ritual obedience must be accompanied by purity of mind, health of conscience and obedience to moral laws. Ablution cult, fertility rites, belief in the immortality of the soul, and ritual meals are prominent features of Mandaean religious belief and practice. In the light of intimate personal knowledge the author describes in some detail the religious, domestic and social rites and customs of the Mandaeans, their religious literature, and the Mandaean language, legends, magic and folk-

lore. So far as we know, Mrs. Drowser has in this valuable monograph supplied the most comprehensive and up to date account of this highly interesting community.

The Travancore Castes and Tribes, Vol I., By L. A. Krishnan Iyer. With a Foreword by Dr. J. H. Cousins and an Introduction by Dr. A. C. Haddan. (Govt. Press, Trivandrum, 1937) Pp. xvi+277. Rs 7.

It is a great pleasure to find Mr. L. A. Krishna Iyer ably following in the footsteps of his late talented father, Dewan Bahadur Dr. L. K. Anantha Krishna Iyer, the well-known author of 'The Cochin Tribes and Castes' and other important ethnographical works. The State of Travancore is a rich storehouse of ethnological material, and students of Indian Ethnology have been long looking forward to a comprehensive account of the tribes and castes of that State. Now that, under the directions of the State authorities, Mr. L. A. K. Iyer has supplied the first instalment of such an account, students will be grateful to the State authorities. We warmly congratulate Mr. Iyer on this fine volume that he has produced and the other volumes that he is preparing for the press. The present volume contains an account of seven out of the sixteen primitive tribes of the State. These are the Kanikkar, the Malankuravan, the Malapantaram, the Malapulaya, the Malavetan, the Malayarayan, and the Mannan. These accounts prepared as a result of first-hand investigations in the field by a trained anthropologist (the author possesses a Master of Arts degree in Anthropology) may be well depended upon as reliable and accurate. It

is to be expected that when this general survey of the *Travancore Tribes and Castes* is completed, the author will be employed by the enlightened State of Travancore to prepare exhaustive monographs, according to up-to-date scientific methods of the comparatively more important tribes of the State.

Linguistics.

Assamese Grammer and Origin of the Assamese Language, with an Introduction containing a Short History of Assamese Literature. By Kaliram Medhi (Author, Gauhati, 1936). Pp. cxxxiii + 539. **Rs 5** (paper), **Rs 6** (cloth).

So far as we know, this is the first exhaustive scientific grammar of the Assamese Language, written in the Assamese tongue. In an elaborate introduction of 124 pages the author discusses the origin and antiquity of the Assamese language, the different component elements in the language and culture of the Assamese people, and the history and characteristics of Assamese literature. Although in the light of more intensive research some of the conclusions or inferences arrived at by the author, such as the racial affinities of the Kolitas, may perhaps require to be revised, the present volume will long remain the standard Grammar of the Assamese language. It is indeed a valuable contribution to Indian linguistics.

Medicine.

An Eight-Hundred year old Book of Indian Medicine and Formulas. By Elizabeth Sharpe. (Luzac, 1937), Pp. 135. Rs. 6.

This is a translation of a very old Hindi work on medicine which, we are told, was "translated (transliterated?) into Gujrati character and thence into English" by the author who describes herself as "a complete lay-woman where medicine is concerned." She availed herself of the help of the Court physician of the Limbdi State. The numerous recipes given in the book may prove interesting to medical men and medico-chemical firms. We should think that a translation of the original with scientific notes and comments by an expert trained in Ayurveda as well as in practical Chemistry might prove still more useful to the medical profession as well as to the lay public.

History.

Modern Mysore, from the beginning to 1868. By Rajakaryaprasakta Rao Bahadar M. Shama Rao. (Higginbothams, Bangalore, 1936.) Pp. x+620.

In this volume we have a scholarly and authoritative history of Modern Mysore from its beginning in 1799 after the fall of Seringapatam to the death of Krishnaraja Wodeyar III in 1868. A retrospect of important events from the foundation of the present Hindu royal family of Mysore by

the Yadava prince Yaduraja to the reconstitution of the Mysore State under British suzerainty in 1799, is also given. Besides the military and administrative history of the State, its social and economic history is also dealt with. The book is an interesting contribution to India's historical literature.

Twenty-one Weeks in Europe. By Raja Raghunath Rao Sankar Rao Pandit Pant Sachib R. K. Deshpande. (Poona, 1937) Pp. 517. Rs. 20.

This is an interesting account of the itinerary of the enlightend ruler of Bhore, in Europe and particularly in Great Britain and Ireland. The book is divided into two parts,—Part I which gives the 'Tour in a Nut-shell and General Reflections', and Part II which contains a 'Detailed Account of the Tour in Great Britain and Ireland. Various notable places of interest visited in the course of the author's journey from India to Europe and back are also briefly described. Numerous choice illustrations add to the interest of this sumptuous volume. The book is enlivened with occasional shrewd observations regarding special characteristics in the manners and customs of different peoples. The book will not only be found very useful by intending Indian tourists to Europe, but will also prove interesting and illuminating to stay-at-home educated Indians.

The Road to India. By Paul Morand, (Hodder and Stoughton, 1937) Pp. 313. 12s. 6d. net.

In this book the talented author gives a delightful and informative, though condensed, account of six or seven journeys to the Near East and

the Orient in steamships and aeroplanes, in motor cars and flying-boats, in railways and yachts. His different journeys took the author from Asia Minor to the Persian Gulf, from Egypt to Turkey, from Egypt to Syria, from Greece to the Arabian Coast, from Italy to India. The book is full of interest not so much for its account of the different 'roads to India,'—the 'economists' road," "the chancelleries" road," "the scholars' road," and so forth as he calls them, as for the flashes of imagination and illuminating ideas with which it is interspersed.

The author gives a vivid idea of the keen desire for wealth, the felt need of expansion, the love of adventure,—all the human impulses that have brought about the discovery of the East by Europeans and their activities and operations in the Orient. "All Europe was attracted by one goal, India. For three centuries white men had only one desire, one instinct, an impressive display of persistent and concentrated effort, a stirring justification of gain and commercial adventure." "The road to India is the aorta of the universe." Now, then, says our author,—“It is our task to emancipate ourselves from the tyranny of the sea and the land, a tyranny as old as the globe, a tyranny of natural roads, subject to conditions of declivity, temperature, seasons, attitudes, a tyranny which is no longer justified...The necessity of supremacy on land and on sea which conditioned the politics of our ancestors since barter was first carried on during the Neolithic age, vanished with the conquest of space.

Soon there will be only one route to India, the most unsubstantial of all, the road of the air."

"Railways follow a zigzag course like human experience; aeroplanes fly direct like human thought. Rivers and the sea, fords and mountain passes restrain peoples and confine them to traditional politics. The air, on the other hand, is free and permits of every kind of combination; the work carried on by governments begins to depend on the radius of action, more or less far-reaching, of this or that aeroplane, that is to say, on the capacity of a reservoir, or the horse-power of an engine; to-day, therefore, the destiny of empires is being decided on the testing-stand of engineers."

Reference Books.

The Indian Year Book and Who's Who. 1937-38, Edited by Sir Stanley Reed and Francis Low. (Bennet Coleman). Pp. 1174.

This is the twenty-fourth yearly issue of this indispensable handy Indian Year-book, the best of its class so far as we know. The book is bound to be of invaluable assistance to the politician, the public man, the man of business, the tourist, and generally the educated public in India. It is a pleasure to find a page and a half devoted even to 'Manners and Customs,' although further details in this section might have been still more welcome.

MAN IN INDIA.

Vol. XVIII. } April—September, 1938. { Nos. 2 & 3.

I. CASTE, RACE, AND RELIGION IN INDIA.

By the Editor

(*Continued from Vol. XVII. No. 4, December, 1937*),

5. Probable Contributions of the Alpine Racial Element to Indian Caste and Culture.

Another important racial element in the Indian population was contributed by the brachycephalic Alpine race. This type of the White Race is believed by some scholars to have originated in the Armenian highlands or rather within the mountain-girt plateau of Asia Minor adjoining it to its west, and towards the end of the Neolithic period to have sent off branches into Central Europe, where they became responsible for the bronze age culture of North Italy and possibly also for the geometric civilization of Greece¹⁷⁷. It was either before or during Chalcolithic times when a powerful early civilization was flourishing in the Indus Valley and its neighbouring regions that one section of the Alpine race appears to have migrated into India by way of the Pamir plateau and the mountain passes of the Hindu Kush. There at this day we find the purest modern Asiatic

¹⁷⁷ J. L. Myers, *Cambridge Ancient History*, vol I, pp. 61-2; 244,
See also E. A. Speiser. *Mesopotamian Origins* (1930), p. 10.

representatives of the race, such as the Galcha, the Wakhi, the Signani or Shighni, the Roshani, the Ishkashani, and the Pakpho, who are, however, comparatively recent immigrants into those areas.

In his *Note on the Physical Anthropology of the Pamir and the Oxus Basin*, Mr. T. A. Joyce sums up his conclusions as follows:— "The point which emerges from the wealth of measurements and descriptive data contained in this paper is this: that the original inhabitants of the Pamirs and the Desert, including the cities now buried beneath the sand, is *Homo Alpinus*, with, in the west, traces of the Indo-Afghan; and that of the Mongolian has had very little influence upon the population."¹⁷⁸

In the present-day Khotanese, too, Alpine is said to be the dominant racial element. In his paper on the *Physical Anthropology of the Oasis of Khotan and Keriya*,¹⁷⁹ Mr. T.A. Joyce notes that the Khotanese are highly brachycephalic (the average cephalic index being 84.4) with a strong tendency to leptorrhiny (nasal index ranging from 50 to 70.6).

Mr. Joyce sums up his finding about the anthropology of the people of Khotan and Keriya thus: "Both are, in the main, of so-called 'Aryan' stock, the chief factor being Lapouge's *Homo Alpinus*. There is, however, in each case an admixture of Turki blood and a further admixture of Tibetan. The latter appears to be stronger at Keriya than at Khotan." Again, "The Pamir valleys, as far as Asia is concerned, seem to be the locality where *Homo Alpinus* appears in his greatest purity. In the Galcha he appears with a slight Turki and Iranian admixture. In the Khotanese the Iranian is replaced by a Tibetan element and, further east, among the inhabitants of Keriya, Mongolian traits are just beginning to appear."

¹⁷⁸ *Ser India*, vol III, App. 1350-1389 [reprinted in *J. R. A. I.*, XIII (1912)].

¹⁷⁹ *J. R. A. I.*, vol xxxiii (1903), pp 305-324.

Sir Aurel Stein after quoting and discussing these findings in the light of archaeological, epigraphical and philological evidence concludes, "The prevalence of *Homo Alpinus* in the anthropological composition of the present Khotan people must be attributed to direct inheritance from the pre-Muhammadan population."

Referring to the cultural characteristics of these Asiatic Alpines, Stein after noting that "the hill-men of Roshan along with those of the valleys of Wakhan and Shughnan to the south represent the racial type of *Homo Alpinus* in remarkable purity as found also in parts of Europe", observes that he noted "much that Alpine seclusion had allowed here to survive in customs, domestic architecture, simple decorations, wood-carving and the like."¹⁸⁰ Neither among the present Alpine population of Central Asia and Eastern Turkistan nor in that of Europe do we find anything approaching Caste nor any of the essential elements that have contributed to the formation of the Caste-system as we know it in India.

Marco Polo who visited Khotan in 1272 A.D., observed,—“The people have vineyards and gardens and estates. They live by commerce and manufacture and are no soldiers.” After quoting this, Sir Aurel Stein, in his *Ancient Khotan*, writes, “Devotion to religious cult is another feature which has survived with undiminished intensity. Buddhist Khotan resisted the introduction of Islam longer than any other part of Eastern Turkistan.”¹⁸¹ The same “peculiar softness

¹⁸⁰ *Innermost Asia*, vol II, pp. 854, 863, 885.

¹⁸¹ *Ancient Khotan* (1901), pp. 144-166. pp. 854, 863, 885.

of temperament, good-natured ease in language and manners and a disposition to make the most of what pleasures the humblest life can offer," "fondness for enjoyments," and ordinarily "law-abiding disposition"¹⁸² which distinguished the Khotanese when in 644.A.D., Hwentsang drew his picture and again when Sir Aurel Stein in the early years of this century visited them, may still be observed more or less among such Indian Alpine communities as the Bengalis and the Gujrātīs. It must be noted, however, that such characterisation could not apply to the ancient Huns or to other Turkic races of Alpine affinities. Hwentsang also noted the love of literature and its cultivation among the Khotanese people. Of this Sir Aurel Stein writes,—“Only the cultivation of literature has apparently been at a low ebb in Eastern Turkestan throughout the Muhammadan period and has remained to the present day.”¹⁸³ Similarly we find that a love of music and its cultivation is a marked feature of the Indian representatives of the Alpine race, and in Bengal love of music, poetry and literature in general. This was in evidence even in Muhammadan times, and has come out in very strong relief during the last fifty years or so, during which period Bengal has produced a world-poet in Tagore and a number of other poets and prose-writers of note, besides such eminent scientists as Bose,

¹⁸² *Ancient Central Asian Tracks*, (1933), p. 299, also pp. 50, 309, 319. See also *Ser India*, vol. II p. 885, vol. III, p. 1005.

¹⁸³ *Ancient Khotan*, pp. 139, 140.

Ray and Saha. Jnaneswara, the first great Mah-rāṭṭi poet known to us flourished about 1300 A.D. It must, however, be observed that love of literature cannot be properly said to be a special trait of the Indo-Alpines as compared with some other races and peoples of both ancient and modern times.

What is however more relevant to our present inquiry is the complete absence of the Caste-feeling among the Asiatic Alpines. Sir T. D. Forsyth,¹⁸⁴ K. C. S. I., C. B., who was in Command of a Mission to Yarkhand, says of the people of Kashghar of which the Alpine Tajiks (including the Wakhi, Shughni, Badakshahi, etc.) form the principal components, that he was struck by their "complete freedom from all the caste-prejudices and restrictions which form so important a character of the system of society in India." This cannot be wholly attributed to the fact that for about the last eight centuries they have been professing Islam. They still retain certain customs, attitudes and beliefs not approved by Islam. Yet even the class-sentiment which in most societies influences choice of occupation and prevents inter-marriage between different social grades, is not much in evidence among these Alpine communities of Central Asia and Eastern Turkistan. Thus Forsyth informs us:—"There are no restrictions of caste as in India to fetter either sex in the choice of a means of livelihood. The father may be a blacksmith and the son a tailor; the

¹⁸⁴ *Report of a Mission to Yarkhand* (1875), p. 89.

mother may keep a shop and the daughter may be a sempstress." Again, "There appears to be no difficulty attending marriage between men and women of different ranks in life."¹⁸⁵

Turning to the European branch of the Alpine race, we find that it forms, in greater or lesser purity, the predominant element in the population of Central Europe, Russia, and the Balkans. It is in the Balkan peninsula alone that the tribal system in Europe survived till the last Great European War.

Although most of the population of the Balkans are now Catholic Christians, and the rest profess Islam, yet so far as the Albanian and Montenegrin peoples are concerned, the tribal instinct is reported to be far stronger amongst them than Church law. Of the Montenegrins we are informed that "tribal law forbade the entry of any outsider into the tribe."¹⁸⁶

The Albanians call themselves *Shkypetars*, from '*shkyp*,' an eagle; and they are reported to say, "We are sons of the eagle, our land is the land of the eagle.' Mr. Durham observes, "It is noteworthy that even to-day a large proportion of the people who live in the districts we are considering identify themselves with birds, and a mass of traditional ballads shows that the custom is ancient."¹⁸⁷ We have already seen (p. 98 *ante*) that in the

¹⁸⁵ *Ibid*, p. 90.

¹⁸⁶ M. E. Durham, *Some Tribal Origins, Laws and Customs of the Balkans* (1928), p. 16.

¹⁸⁷ *Ibid*, p. 131.

Aitareya Āraṇyaka, the people of *Vaṅga* (Bengal) are similarly identified with "birds." This coincidence, which does not appear to have been hitherto noticed, may perhaps be taken to corroborate the Alpine theory of Bengali origins. A similar corroboration may probably be found in the fact that the *Māhrāṭṭā Chandraseni Kāyastha Prabhus* of the Bombay Presidency contain a strong brachycephalic element and have, among their ancient family names, such designations as 'Garuḍe' (eagle) and 'Bahire' (hawk), and the late Rai Bahadur B. A. Gupte, himself a *Kāyastha Prabhu*, in his booklet entitled '*The Bombay Kayastha Prabhus*' (p. 29) explained the clan-name 'Garuḍe' as meaning 'those with the eagle on their banner.' Some *Deshasth Brāhmaṇ* families also bear the surname of 'Garuḍa.' In this connection it may be noted that each tribal group among the Albanians is called a *bairākh* or 'flag' and the headman of the clan as *bairākhtār* or standard-bearer.¹⁸⁸ The late M. Haraprasad Shastri's suggestion made at the Seventh Annual Meeting of the *Baṅgiya Sāhitya Sammilan* (Bengali Literary Association) to the effect that the *Āryan* immigrants into India out of their jealousy towards the Bengali people who had by then attained a higher civilization than the *Āryans* and had a different religion, applied the epithet of "birds" to them in contempt, hardly appears quite as probable. It may, however be noted that there were in comparatively

¹⁸⁸ *Ibid*, p. 131. In this connection reference may be made to cf. the name "*Garuradhvaḥ*," "one having the Eagle on his flag," as applied to Vishnu and to Sri Krishna.

early times in Bengal, Gujarat (Saurāshṭra), Anga (North Bihar) and Kalinga (Oṛissā) famous places of pilgrimage, presumably of the Alpine and other pre-Āryan inhabitants of those parts, which Āryan pilgrims had begun to visit although, strangely enough, they were required to go through an expiatory ceremony (of renewing the sacred thread) on their return from such pilgrimages.¹⁸⁹

However that may be, in none of the European communities of Alpine affinities, not even among the tribal Balkans, do we meet with any traces of the caste-system, although the beginnings of a class-system had developed already during the tribal stage. As noted above, even the tribal Albanians have had their 'Bairākhtār' (standard-bearer or chief) and governing council of *plaki* or elders in each *Bairākh* or tribe consisting of many exogamous family-groups or "Vlaznii" (brethern). Among the Montenegrins each tribe is divided into several "bratsvos" or exogamous groups, each consisting of the families of many brothers and cousins. Most *plemena* (tribes) had a *bratsvo* esteemed peculiarly noble, which provided the tribe's leading men. These leading men were called 'glavari' (heads).

¹⁸⁹ "Anga Banga Kalingeshu Saurāshṭra Maghadhesu cha, Tirthayātram bina gachchham punah samskaramhrati." (Quoted in the *Vīramitrodaya*). This treatment of Bengal, etc., in the earlier centuries of the Christian era is now believed to have been due to the then dominance of non-orthodox faiths like Buddhism and Jainism, particularly the former, in those countries.

Nominally the posts were elective. Practically the electors were the other 'glavari'. They co-opted the new member and usually chose the eldest son of the late "head." In practice most of the leading posts are said to have been for many generations held by certain families. We thus see a tribal people who, theoretically, had communal self-government and free election, but actually, developed ruling families amongst them.¹⁹⁰ Tribal exclusiveness of the nature of caste-separatism is, or at least was until lately, in evidence in the Balkans. Up till 1913, "in those parts of the Balkans where the tribal system was still in force, the reluctance of the tribe to admit a stranger was still marked."¹⁹¹ Name-taboo and food-taboo and the 'stranger-taboo', as precautions against unknown dangers, are however still common in the Balkans. And such taboos, common in tribal societies, might perhaps be regarded as among the germs out of which similar elements developed in India's later caste-system. Most other peoples of Alpine affinities in Europe have long outgrown the tribal system and developed a division of society into classes graded on the basis of rank, wealth and influence or power. But their class system does not partake of the nature of "caste system" as it is known in India. If they had at one time observed taboos of the kind noted above, they appear to have long shed them off. It is interesting to observe, in passing,

¹⁹⁰ *Ibid*, p. 209.

¹⁹¹ *Ibid*, p. 295.

that the peculiar racial type of the Balkan people is what is called the Dinaric, exhibiting a flattened occiput as distinguished from the rounded head of the general Alpine type, and this, as Dr. B. S. Guha's measurements show, appears also to be the characteristic of the Bengali brachycephalic type.¹⁹²

Turning to these Indian representatives of the Alpine race such as the Bengalis, the Gujrātīs, and the Mahrāṭṭās, although we find that they have long adopted the Hindu Caste system, yet some sections of them do not appear to be as particular in the observance of its latter-day rigid rules as the generality of Hinduized Dravidian castes of Southern India. As has been already noticed, high caste Gujrāṭi Hindus are reported to be not particular about the person fetching drinking water for them. Bengali Hindus, too, are not as rigid in their observance of the minutiae of caste ordinances as the Dravidian Hindus of the South. In making this remark, I do not ignore the fact that in certain families and particular sections of a caste among Indo-Alpines, a very strict rigidity of caste-restrictions exists. But this is generally due either to an ambition to reach a higher social level or to a spirit of socio-religious idealism connected with exaggerated notions of external purity and defilement.

When Buddhism with its doctrine of equality and fraternity appeared, it soon secured a numerous follow-

¹⁹² "An Outline of the Racial Ethnology of India," in *Field Sciences of India* (Calcutta, 1937), p. 135.

ing in Bengal, where a large number of Buddhist monasteries came to be erected ; and Bengal produced many great Buddhist teachers and preachers of note such as Shilabhadra and Atisha Dipankara. Later, the neo-Vaishṇava cult, with its principle of equality and its disregard of caste-distinctions, vigorously flourished in Bengal, and neo-Vaishṇavism also attracted the Gujrāṭi as powerfully as it did the Bengali. Almost contemporaneous with the first eminent Bengali Vaishṇav poet Chāṇḍīdās was Gujrāṭ's first famous poet, Narsimha Mehta, also a Vaisṇava, who, although of Brāhmaṇ origin, had no scruples to eat with men of the lowest castes. Like Buddhism and Vaishṇavism, Jainism, too, which, in theory at least, rejects caste, attracted a very large following among the Gujrāṭis and, to this day, a fairly large population of Gujrāṭ Vaniās profess Jainism. Jainism also at one time had its adherents in Bengal. The great Jaina Tirthāṅkaras Śrī-Aṅgshunātha and Vasupujya were born in Bengal and the greatest Tirthāṅkara, Mahāvīra, spent eighteen years in preaching Jaina doctrines in Western Bengal (Rāṛh).

It is sometimes remarked that a spirit of democracy was responsible for the fact that the first historical King of Bengal, Gopala Deva, the founder of the Pāla dynasty, was *elected* by the people themselves as their king and leader in the eighth century to protect the country and its inhabitants from the invasions of the Rāshṭrakūṭas, Gurjāras and other aggressors from outside. Undue stress should not, however, be placed on this fact, for such a pheno-

menon can be paralleled from the history of other societies and countries, ancient and modern, under similar circumstances of national danger.

As regards the Mahrātṭhas, one authority states that, although now regarded as quite orthodox 'Hindus', they "make no difference between food cooked with or without water, and will accept it either from a Brāhmaṇ, Rājput, 'Tirole Kunbi, Lingāyat Bania or Phulmāli."¹⁹³ Enquiry however shows that distinction is generally made between food cooked in milk and that boiled in water. The latter may not be generally taken from socially 'inferior' castes, whereas the former may. As for their democratic national spirit, Sir R. Jenkins in his *Report on the Territories of the Raja of Nagpore*,¹⁹⁴ wrote, "The most remarkable feature perhaps in the character of the Mārāthas of all descriptions is the little regard they pay to show or ceremony in the common intercourse of life. A peasant or mechanic of the lowest order, appearing before his superiors, will sit down of his own accord, tell his story without ceremony, and converse more like an equal than an inferior, and if he has a petition he talks in a loud and boisterous tone and fearlessly sets forth his claims."

Although there is little definite record of the cultural and other achievements of the Indo-Alpines, whether of the Western, Eastern or Central parts of India prior to the Buddhistic period, yet by that period we find them holding a high

¹⁹³ Russel, *Tribes and Castes of the Central Provinces*, Voi. IV, p. 204.

¹⁹⁴ *Ibid*, p. 48.

position in society. Bengali and other Kayasthas are by some identified with the 'Rajukas'¹⁹⁵ mentioned in the third edict of Emperor Asoka and described as holding not only the highest administrative posts but also, as *Dharma-mahamatras* or prime ministers of religions, being sent by the Emperor to preach the doctrines of Buddha. In his *Short History of the Indian Kayasthas*, N. N. Vasu has collected a number of references to show that ever since the Kayasthas, as the highest class of Indo-Alpine affinities, emerged in history in the Maurya period, they were a great community who held high ministerial posts in different parts of Northern and Central India, and some of them "were themselves kings and potentates, and claimed the privileges and honour due to the Brāhmans." All his identifications are, however, not altogether free from doubt.

All that can be definitely said is that anthropometric measurements reveal that the Bengali Brahmins and Kayasthas are racially identical or at least most closely related. As we have already seen, Dr. Bhandarkar (*Indian Antiquary*, pp. 7-37) cited certain identities in surnames as indicative of the affinities of the Bengali Kayasthas with the Nagar Brāhmins of Gujarāt. But these surnames in the two cases might appear to belong to two different categories, namely, integral parts of proper names or individual surnames in the latter case and family surnames in the former. Epigraphic evidence, it may be noted, proves the existence in Bengal in the 5th century of some Nagar Brāhmins.¹⁹⁶

¹⁹⁵ *Indian Historical Quarterly*, 1930 p 6 ff.; *Indian Culture*, Vol. I, p. 508. A cultivating caste called Nagars live in the Maldah District of Bengal to this day. At the last Census they numbered 14,356 in the Maldah district and altogether 16,914 in Bengal. These Nagars of Bengal are divided into two sections, *Kanai* and *Palsai*, which might appear to correspond respectively to the *Krishnora* division and the *Prishnora* division of Nagar Brahmins of Gujrat. It would not, however, be safe to infer racial identity from mere identity of names, without anthropometric and other cogent evidence. All that anthropometric similarities go to show (*vide Indian Census Report*, vol. I, part III) is that there is a common non-Mongoloid brachycephalic element in both Eastern and Western India.

¹⁹⁶ *Indian Antiquary*, XV., p. 40.

These facts as also such further facts as that in some epigraphic and other records certain Kayasthas of Bengal and elsewhere are described as 'Kayastha Pandit [Loha] Bhatta',¹²⁷ 'Kayastha Thakkura' or 'Kayastha Thakur', 'Kshatra Kāyastha', 'Maharashtra Kshatrapa Kāyastha', etc., have been adduced to show that the Kayasthas who were the leading section of Alpines in India were regarded as equal in social status and rank to Brahmans and Kshatriyas, and that the Varna and caste systems were not adopted by them until some time after the social and religious domination of the Aryans in India.

That the Kayasthas held in the past, as they still do, quite a high rank in Hindu society is, at any rate, clear from such literary evidence as that in a stage direction in Kalidasa's famous drama *Mrichchhakati* ('The Toy Cart') the Kayastha and the honoured banker (*Sreshthi*) are classed together.

The essential democratic spirit of the Bengalis, Gujratis and Mahrattas would appear to have been originally ill adapted to a caste-hierarchy.

Now, as for the outstanding contributions of the Indo-Alpines to Indian culture. The Bengalis in ancient Vanga (East and South-east Bengal), Pundra or Barendra (North Bengal), and Sumha or *Rarh* (West Bengal) appear to have developed a considerable civilization of their own in pre-Buddhistic times. Although the historicity of the accounts given in the *Mahabharata* of Bengali kings and potentates leading their armies to the great Kurukshetra War may be open to question, and the same may be said of the tradition, recorded in the Buddhist *Mahavamsa*, of the origin of the name 'Simhal' or Singhal—the old name for the island of Ceylon—

¹²⁷ See *Indian Antiquary*, IV., p. 101; Havell, *Indian Painting and Sculpture*, pp. 79, 79-

from a Bengali prince, Vijay Simha by name who is said to have made a conquering expedition by sea to Ceylon and to have occupied the island in the sixth century, B.C., there may perhaps be something in the late M. Haraprasad Shastri's contention that, even before the use of iron was known, Bengalis used to undertake trading voyages in their cane-bound boats, known as '*Balām* boats', after which the kind of fine rice which was then a principal merchandise of Bengal's trade is still known as '*Balām*' rice. More certain, however, is the evidence from the bas-reliefs in the Boro-Budor temple of Java of the sculptural skill of Bengali, Gujrāṭi and Kalingi artists. In these and other bas-reliefs in Indonesia may be found representations of ships such as were built in such parts of Bengal as Tamruk which conveyed Bengali and other Indian adventurers and artists to Java, Sumatra, and other lands for commercial as well as proselytising purposes. But more important than their contributions to India's economic and artistic culture has been the contribution of the Indo-Alpines of a stimulating idealism. The democratic spirit of the Alpine Bengali went hand in hand with the development also of individualism. The strong individualistic bent of Bengali mentality may be illustrated by, among others, the fact that while the general law of inheritance among other Hindu communities of India regards family property as the joint inheritance of father and sons and grandsons together, and generally the seniormost member, whether grand-father or father or the eldest brother, acts as the head of the

joint family and manages the property but may not alienate the joint property or any part of it except for legal necessity,—under the Bengal school of Hindu Law, on the other hand, the father or grandfather, during his life-time, is regarded as the sole owner of the inheritance in his own right and may alienate or otherwise deal with the ancestral property or any portion of it as he likes, and his sons and grand-sons, as such, can have no right or title to the property. Under the Bengal school of Hindu law, property can devolve on heirs only by way of inheritance and not by survivorship even in the case of a joint family.¹⁹⁸

Finally, it may not be without significance in this connection that the principal religious and social reform movements of recent times in India which had for their cardinal tenet the doctrine of social equality and brotherhood of man and the abolition of caste owe their initiation and development in most cases to men of the Indo-Alpine race. The Brāhmo-Samāj and the Rām Krishna-Vivekanda Missions were inaugurated by Bengalis, the Anti-untouchability ('Harijan') movement by a Gujrāti (Mahātmā Gāndhi), the Phil Seva Maṇḍal by another Gujrāti (A.

¹⁹⁸ Although the *Smritis* (particularly the Institutes of Manu, Yajnavalka, and Narada) are regarded as the principal sources of Hindu law, the *Mitakshara* which is a commentary on the Institutes of Yajnavalka by Vijnaneswara (11th century) is regarded as the supreme authority throughout Hindu India except in Bengal. In the Mahratta country (particularly Gujrat, North Konkan and the Island of Bombay), however, the *Vyavahara Mayukha* is regarded as the superior authority on all points in which it differs from the *Mitakshara*.

V. Thakkar), and the Servants of India Society by a Mahrāṭṭi (Gokhale). Among the democratic nationalist leaders of modern India, too, the names of such Bengalis as Surendra Nath Banerji, Chitta Ranjan Das, Subhas Chandra Bose and Jatindra Nath Sen-Gupta, such Mahrāṭṭis as Bāl Gangādhār Tilak and Gopal Krishna Gokhale and such Gujrātis as Mahātma Gandhi and the Patel brothers will be remembered by posterity as having been among the greatest pioneers of modern India's struggle for political liberty. Although the influence of cultural contact with Europe has indeed been the stimulating factor, the element of racial genius, too, would appear to have played its part.

Thus, though with increasing complexity of culture, the Alpine immigrants in India must have developed economic and other class-divisions long before they adopted the *Varṇa* classification of Indo-Āryan socio-religious polity, they do not appear to have made any specific contribution of their own to the formation of the complex caste-system of Hindu India. And this is only what we might naturally expect. For, as we have seen, neither the Asiatic Alpines outside India nor the European Alpines exhibit, in their social constitution and socio-religious creed, any of the peculiar and essential elements of the Indian caste-system that distinguish it from the class-systems of other civilized peoples.

6. Probable Contributions of the Mongolian Racial Element to Indian Castes.

It is mostly in Assam and the North Eastern Frontier Province and also, to some extent, along the northern frontiers of India that the Mongoloid population of India is concentrated (see *ante*).

The Mongoloid tribes of the northern frontiers still, as a whole, stand outside the Hindu socio-religious polity of caste. Neither the slightly Mongoloid Kanet of Lahoul and the Gurkha of Nepal nor the most distinctly Mongoloid Limbu of Nepal nor the Mongoloid Bong-pa or Lepcha of Nepal and Sikkim show any predilection for caste. The slightly Mongoloid Thāru of the Tarai of Motihāri district in North Bihār is still in the 'animistic' stage with a slight veneer of Hinduism and is in course of formation into a tribal caste.

The main centre of the Mongoloid element in India is the Province of Assam. Here, as we have seen in a previous article an originally long-headed Proto-Australoid, with possibly some slight Proto-Negroid, substratum, has been thoroughly overlaid and submerged by generally broad-headed, aggressive Indo-Chinese Mongolian elements.

These tribes, too, whether of the Bodo, the Tai, the Kuki-Chin or the Kachin, the Naga, or the Mon-khmer groups, stand outside Hinduism and the Hindu caste-system.

As for the Assam Hindus, they consist, first, of the descendants of immigrants mostly from Bengal, with many cases of more or less infiltration

of Mongoloid blood, and secondly, of the Hinduised aboriginal population.

References in the Mahābhārata and other early Samskrit works, and in later epigraphic records, point to the early contact of the Indo-Āryans with Kāma-rupa or Assam. From the Nidhanpur copper-plate of King Bhāskara-Varmā of Kāma-rupa, a contemporary of Emperor Harsha of Kanouj, we learn that during the reign of his ancestor Mahābhutivarma (*circa* 490-520), Rigvedī Yayurvedī, Sāmavedī, and Atharvavedī Brāhmaṇs of various denominations had been settled in Kāmrupa, and land-grants were made to them. From a copper-plate grant of Rājā Lokanātha of Tippera, a feudatory chief under Bhāskara-Varmā, we further learn that inter-caste marriage was in vogue in those parts in the seventh century.¹⁹⁹

Even though with the progress of civilization and the mixture of races and cultures, various classes evolved in Assam and came to be graded according to occupation, and some amount of restrictions in respect of marriage and food arose, such gradation would be naturally based either on historical or on economic grounds, or both, and the restrictions to marriage and food would appear to have been elastic.

Caste appears stills to sit lightly on these communities. Even the Assamese Brāhmaṇ is said to disregard the stricter ordinances relating to

¹⁹⁹ E. A. Gait, *History of Assam* (2nd edition), pp. 28-29 ; N. N. Vasu, *Social History of Kamarupa*, vol. III, pp. 14-15.

marriage. Buddhism, with its ideas of fraternity and equality, once obtained considerable hold on the Assamese population. As we read in the *Assam Census Report, Part I*, of 1931—"Castes and sub-castes are still in the process of formation.....In early times (between *circa* 500 A.D. and 1100 A.D.) the distinction between the Brāhmaṇs, Vaidyas and Kāyasthas was not acute and was based more or less upon functional differences. The ranks of the Vaidyas and Kāyasthas, on account of their respectability, were swelled by accretion from the lower ranks through the adoption of certain common *padavis* such as Dutta, Dasa, Sena. In earlier times, I think, the humbler ranks went by the general name of 'Dasa', i. e., of the 'Dasa-kula' which stood in contrast to the Deva-kulas or Devas or the twice-born formed by the above-named three castes.....Most of the Varṇa-Brahmaṇas are apparently indigenous. There is no evidence to show that they migrated here from some other place".

O'Mally²⁰⁰ writes, "Assam is remarkable for the extent to which different castes intermarry; in the State of Manipur local Brāhmaṇs marry Kshatriya women without losing caste, and the children are Brāhmaṇs; if a Brāhmaṇ woman marries beneath her, she merely sinks to the level of her husband."

In a preceding chapter I have attempted to show that the evidence of the existence of the 'local tabu' in certain caste-less Nāgā communities associated with

²⁰⁰ *Indian Caste Customs* (1932) p. 23.

certain unaccustomed occupations hardly throws any light on the origin of Caste. Neither the comparative scale of 'purity' attached to different occupations nor the Karmic law, both of which together are of the essence of the later Hindu Caste-system, has been indigenous to Mongoloid Assam, just as both these elements are, as we have seen, exotic to the Mediterranean-Dravidians and to the Indo-Alpines.

As for Mongolian communities outside India, they, too, are innocent of any of the essential and peculiar elements that constitute the differentiae of the Indian caste-organization.

Thus, there appears no valid reason to suppose that the Mongolian race had any contributions to make to the Hindu caste-system.

II. THE NEW YEAR FESTIVALS.

By

KALIPADA MITRA, M.A., B.L.

Most of the festivals are associated with the beginning of the new year. When does the new year begin? Let us see when it used to begin in ancient times.

Tilak opined that in the remotest period of antiquity—five or six thousand years before the birth of Christ—the vernal equinox was in the *Punarvasu nakshatra*, the winter solstice happening at the *Chitra* full moon. “The presiding deity of *Punarvasu* is *Aditi* and we are told in the *Aitareya Brāhmaṇa* (1.7) and the *Taittiriya Samhitā* (VI. 1. 5. 1) that all sacrifices must commence and end with *Aditi*. The story begins with the statement that the Sacrifice (the mysterious sacrificial personage) went away from the gods. The gods were then unable to perform any further ceremonies, and did not know where it (the Sacrifice) had gone to and it was *Aditi* that helped them, in this state, to find out the proper commencement of the sacrifice. This clearly means, if it can mean anything, that before this time sacrifices were performed at random, but it was at this time resolved and fixed to commence them from *Aditi*.”²⁰¹ It was from her that the

²⁰¹ *Orion*—Reprinted, Ashtekar & Co. (1916), p. 201.

Ādityas were born (Rv. x. 72, Sat. Br. III) or the Sun commenced his yearly course.

The commentators say that it was in this very *nakshatra* that *yajña* and *samvatsara* began and ended, i.e., that the year began and ended in this vernal equinox. The year (*varsha*) was equivalent to *yajña*, as with it sacrifice began and ended. For that reason two heads of the *nakshatra* were imagined, the Gemini, or man and woman. We know them as Castor and Pollux.²⁰²

Then, at a subsequent time (say 4000 B.C.) the vernal equinox was in the *Mrigas'irā nakshatra*, the winter solstice being on the *Phalgunī* full moon day. The other name of *Mrigas'irā* was *Agrahāyanī* (*Mrigas'irshe mrigas'irastasmānnevāgrahāyanī*). When the sun came there the new year began; it was therefore so called—*agra*, first, and *hāyana*, year. In the *Bhagavadgītā*, S'ri Kṛṣṇa, variously describing himself as the first, designates himself *Mārgas'irsha* of the months.

Later on the vernal equinox was in the *Rohiṇī nakshatra*. The Rishis of the *Aitareya Brāhmaṇa*, who were quite unaware of the precision of the equinoxes, were greatly surprised at this, for they knew that according to the Vedas the year began from the vernal equinox in *Mrigas'irā*, but now they found the equinox receding in *Rohiṇī*. With the new year they used to begin the sacrifices, the year (*samvatsara*) to them was the sacrifice (*yajña*); the Prajapati, for without sacrifice there would be no creation (*prajā*). Their surprise was

²⁰² Yoges' Chandra Ray—*ब्रह्मसिद्धि*, p. 433.

embodied in a legend (*Ait. Br.*, 3. 33) viz., that Prajāpati was once in liason with his own daughter Ūshā. The gods, wroth at this, created Bhūta-vān, who pierced the sin (*akrita*) of Prajāpati and went to the heavens. The daughter became metamorphosed into a deer, that became the *Rohiṇi nakshatra*. Thus arose the deer (*Mriga*) and the hunter. The equinox having changed, the year or Prajāpati, also changed, and this was regarded as the *akrita* (or what was not done before) of Prajāpati, the year.

At the time of the composition of the *Taittirīya Samhitā* and the *Brahmaṇas*, the equinox was in *Krittikā* (Pleiades), the winter solstice being on the full moon day of Māgha. Now it is expressly stated in the *Taittirīyā Brāhmaṇa* (V. 2.7) that the *Krittikās* are the mouth of the *nakshatras* and the first of the *devanaksatras* (*Mukham vai etannakshatrāṇām yat kṛttikāhdevagrha vai nakshatrāṇi* etc.). The New Year began from now. In fact all calculation began from *Krittikās*. Perhaps this happened about 2200 B.C., or according to those who would not accept such an ancient date for the composition of the *Taittirīya Samhitā*, about 1300 B.C.

The new year began also from the solstices. Tilak says: "With the solstice in Māgha, the equinox will be in the *Krittikās*; while when Uttarāyana begins in Pausa, the equinox is in As'vinī. As'vinī and Pausa, *Krittikās* and Māgha, and Mṛgas'iras and Phalgun are thus the correlative pairs of successive year beginnings depend-

ing entirely upon the precession of the equinoxes, and the facts, statements, texts and legends discussed in the previous chapters supply us with reliable evidence, direct and indirect, of the existence of all these year beginnings in the various periods of Aryan civilization."³

From the Vedāṅga Jyotisha, the main purport of which was to determine the time for performing the Yajñas, it appears that the sun moved towards the north in the beginning of S'ravishṭhā (Dhanishṭhā) *nakshatra*, and towards the south in the middle of the As'leshā *nakshatra*, i. e., in the month of Māgha and S'rāvaṇa respectively. The year began with the *uttarāyana*. S'ravishṭhā was therefore regarded as the first *nakshatra*, whence the year began.

Some say that the year is called *varsha* because it began in the rainy season (*varshā*). Dr. Shama-S'āstrī says : "As pointed out elsewhere the Vedic year began with the summer solstice and had the winter solstice in the middle.....Also according to the Arthas'āstra the new year at that time began with the summer solstice at the end of Āshāḍha(Arth., III. Kālamāna).....From this it follows that on the summer solstice day when the day is the longest, it dawned about two hours earlier than during the winter solstice. This early dawn is said to have been termed *Vyushṭa* [*prabhāta*, morning, see *Sis'upālabadha*, 12.4.] In

³ *Orion*, p. 200.

the *Arthasāstra*, of Kaṭīya (II. 6) it is used as the name of a particular division of time, along with such divisions as 'the royal year, the month, the half-month and the day.' Again, in II 7, Kaṭīya uses the word in connection with the examination of revenue accounts. He says that the receipt, expenditure and net revenue shall be verified under certain heads in 'Vyushta'. It cannot be taken to mean 'morning' here, for there is no reason to restrict the examination to morning time.....Now if we take it in the sense of 'New Year's Day' for the reason specified above, I think it will suit the text admirably well; for the accounts are ordered to be submitted at the end of Āshāḍha (II. 7) for examination on the Vyushta or New Year's Day. The enumeration of seasons with Śrāvaṇa in the rains is a proof that Śrāvaṇa was the first month of the year at the time of Kaṭīya. The *Sūrya-prajñapti* of Mahāvira which is presumed to be a work of the same period says in words of unequivocal meaning that the new year began with the longest day in the month of Śrāvaṇa.....In the *Rigveda*, the *Atharva* and *Yajus Samhitās*, Vyushti, Vyusha—the cognate of Vyushta, are used not merely in the sense of early morning, but decisively in the sense of a periodical early morning suggestive of a New Year's Day.....As in each year of the Vedic cycle of three years, fire was kindled anew, Agni is said to have his triple places of birth. Since years were counted in terms of gods or multiples of three, corresponding to the three years of the

Vedic cycle, deities are also there to be of triple generations.

‘Five milkings answer to the fivefold dawning, five seasons to the cow who bear five titles’ (A. V. VIII. 9, 15).

Here the five cyclic dawns are the five milkings of the new year cow.

‘This is the dawn when there are five dawns and five milkings’ (Kaṭ S. V. 9. 10).

The symbolical milking of the new year cow perhaps in time has resulted in the actual milking of the cow on the New Year’s Day and developed into the general cow worship.

Dr. ShamaSāstry concludes by saying: “I may conclude that the Vedic words Ushas, Vyush, Vyushtī and Vyushta mean the New Year’s Day of the Vedic poets on the days of summer solstice when it dawns about two hours earlier than on other days about 35° northern latitudes. The beginning of the year on the day of summer solstice seems to have been prevalent in India from the Vedic times down to the time of the Mauryas when the Arthasāstra, in which Vyushta seems to have been used in the sense of a New Year’s Day, was written by Kauṭilya. The ancient Jains also began their year with the summer solstice, as repeatedly stated in the *Sūryaprajñapti*. Ushas is also called Sūryā who is described as going in the three-wheeled car of the As’vins for her marriage with the Sun on the New Year’s Day. Once the Vyushtī or New Year’s Day of the Vedic poets occurred when the colure of the solstices

passed through Pūrvaphalgunī from which it receded to Maghā; then it was observed to be passing through As'leshā at the period of the Vedāṅga Jyotisha, then through Pushyā during the time of Mahāvīra the 24th Tirthaṅkara of the Jainas and then through Punarvasu in the time of Varāha Mihira." ⁴ "The Seleucidan, the Coptic and most of the calendars in vogue in the Levant begin their year with the autumn equinox. Only the Roman Calendar and the year of Nabonidas reckon it from spring".⁵

Thus we see that the New Year began with the vernal equinox in Punarvasu, Mrigas'irā, Rohiṇī, Krittikā and As'vinī; with the solstices in Pushyā, Maghā, Phālgunī, S'ravishṭhā (Dhanishṭhā) and S'ravaṇā. The months were named after the *nakshatras*, and as with each *nakshatra* in successive times the year began, that particular *nakshatra* was put at the head (*ādi*) of the list. We find the As'vinyādi and Krittikādi lists. And the first months of the new years began accordingly with S'rāvaṇa, Ās'vina, Kārtika, Mārgas'irsha (Agrahāyana), Māgha, Phālguna—and so forth. Kaye says :⁶ "The early lists all begin with Krittikā, but the *Mahābhārata* puts S'ravaṇā first, the *Jyotisha Vedāṅga* begins with S'ravishṭhā, the *Sūryaprajñapti* with Abhijit, the *Sūryya Siddhānta* with As'vinī. But here As'vinī is definitely equated with the vernal equinox, while Abhijit,

⁴ Q. J. M. S.—Vol. XV p. 76.

⁵ J. R. A. S.—1917 (Kennedy) p. 499 quoted in Q. J. M. S. Vol. XI p. 314.

⁶ I. A. (1921), p. 47.

S'ravaṇā and S'raviṣṭhā, which are contiguous, are equated with the winter solstice; and the interval between As'vinī and any one of the other three is 9 degrees, if we measure according to the equal division scale of the *Jyotiṣha Vedāṅga* or the unequal *Sūryaprjñapti* scale as we please. The change of importance is therefore from Kṛittikā to As'vinī, an interval of from about $13\frac{1}{2}$ to a possible 40 degrees. Was this change due to precession?.....According to Tilak it was stated by Garga that Kṛittikā was first for purposes of ritual, while for the purpose of the calendar S'raviṣṭhā was put first....."

By precession of the equinoxes is meant a slow backward motion of the equinoctial and solstitial points along the ecliptic. Owing to this the equinoxes and the solstices occur about one day earlier once every 72 years or so. The rate of the motion is not uniform. It requires an observation of a thousand years or more to notice the effect of the precession. The motion is so slow that 25,868 years (or roughly 26,000 years) are required for a single circuit of the swaying axis round an imaginary line upright to the plane in which the earth travels"⁷ It has already been noticed that owing to this the equinoxes and solstices occur at different times.

There were two ways of counting the beginning of the lunar month, viz., from the pūrṇimā and the amāvasyā. Previous to the time of the

⁷ I. A. (1922), p. 144.

composition of the *Vedāṅga Jyotiṣha* the lunar month was counted from the pūrṇimā, but since then it was counted from the amāvasyā. At the time of the *Taittirīya Saṃhitā* the year began from Māghī pūrṇimā, at the time of the *Vedāṅga Jyotiṣha* from Māghī amāvasyā.

We may, therefore, conclude that the new year began from the full moon day or the new moon day at different times of the year, i.e., in different months, according to the equinoctial and solstitial points, viz., when these actually happened or when the changes became manifest. For example, although now the winter solstice actually happens at the end of the first week of Pausa, the ritualistic uttarāyaṇa is taken to begin 22 or 23 days later, i.e., on the 1st of Māgha. Similar observations apply to the 1st of Vaiśākha. This shows that the new year begins after the samkranti. Popular and important ritual also begins the year, e.g., some people take the new year as beginning from the Durgā Pūjā or the Basantī (Durgā-Rāma Navamī) Pūjā. The years beginning with Kojāgarī Lakṣmī Pūjā (full moon day) and Kālī Pūjā (new moon day) have extra significance. In some parts of Bengal the new year begins with the gathering of the harvests and popular thanksgiving, when what is called the 'new rice ceremony' (নবান্ন) takes place.

When the old year ends and the new year begins it is natural for man to settle the old accounts and begin the new, to forget (ভুল, ভোলা)

the past and turn over a new leaf, to get rid of old impurities and begin a pure life.

In Bengal the *kāl-khātā* (the new accounts, or *maharat*) begins either on the *Basantī Pūjā* or *Rāma Navamī* day or the 1st *Vaisākha*. Throughout the *Murshidabad* district (as I am informed) the 1st of *Māgha* begins the new year, old accounts are settled, new accounts begun, old servants leave service and begin new agreements (verbal), and new servants are appointed.

In *Bihar* and the *U.P.* old accounts are settled and new accounts are begun on the *Kālī Pūjā* or *Divālī* day. A certain gentleman from *Sindh* tells me that the *Kojāgarī Lakshmī* day is regarded as the lucky day, when old accounts are settled and new accounts begin. The New Year's Day begins on the *Kālī Pūjā* and *Laksmī Pūjā* days. We have seen this settling of the old accounts and beginning of the new with the new year is *Srāvana* at the time of *Kauṭilya*.

There is the association of fire with the New Year's day; and let us see the significance of it. We have already noticed that in each year of the Vedic cycle of three years fire was kindled anew. New fire had to be obtained for sacrifices. At one time it was obtained by friction of two pieces of wood. This custom of obtaining fire for performance of *yajña* was not abandoned. Two pieces of wood were obtained from the *Asvattha* tree that grew on the *Samī* tree and these were called *arāṇi*. Before the sun-rise, fire was obtained by friction (called *agnimanthana*) of

these two pieces for the performance of the *yajña*.

The fire festivals in Europe and elsewhere had the characteristics of a *yajña* or sacrifice. Let us take the Need Fire. Frazer assigns to it a "very remote antiquity" and regards it as "the source and origin of all the other fire festivals." The "need-fire" was sometimes called the "wild-fire," "the living Fire," to distinguish it from the tame fire produced by ordinary methods.

The regular method of producing the need-fire was by the friction of two pieces of wood; it might not be struck by flint and steel. The wood employed was the sacred oak or fir wood. The method of obtaining the fire described by Frazer was the method employed in the Vedic times for obtaining fire for *yajña*. The *needfire* was therefore the *yajñāgni*, and all the fire-festivals that owed their being to it may be regarded as sacrificial fires, though the memory is lost. The ashes must be sacred and protect cattle and men. Even now-a-days a Hindu regards the ashes of *homa* to be sacred and make a mark with them on the forehead.

There is the *Bahnyutsava* (lit., fire festival) on the night of, or the night previous to, the Phālguna Pūrṇimā or the Doljatra, or Holi, as it is called in Bihar and Northern India. In Bihar it is technically called the burning of the Samvat. In Bengal a small hut made of bamboo, straws and other fuel is burnt, or a human effigy is burnt; or a flag-staff is burnt, or a ram in effigy is burnt, (and hence called *Meṛā* or *Bheṛā Poṛāno*).

The human effigy is called the Holikā or Holākā, and the burning, the Holākā- or Holikā-dahana. In the Marāṭhā country and Western India the Dol-Pūrṇimā is called also *hutās'anī* which signifies Phālguna Pūrṇimā. *Hutās'anī* literally means that *tithi* in which there is the *as'ana* (or eating) of the *hūta* or the *bali* or offering burnt at the sacrificial fire. This corresponds to the *meṛā-porāno* of Bengal. The suggestion is that with the beginning of the new year was performed the *yajña* or the sacrifice, an animal was offered at the sacrificial fire, and it was then eaten by the *yajamānas* (sacrificants), the meal being sacramental. The memory is preserved in the name of the *hutās'anī* in Mahārāṣṭra and *meṛā-porāno* in Bengal. Whereas originally an animal, say a sheep (*meṛa*), was thrown into the sacrificial fire, now only an effigy rudely made of straw and bamboo resembling a sheep is burnt. In northwest Bengal a dough of pounded rice in the shape of a ram is actually thrown into the fire. In northern Bengal in a small hut a ram is placed, then it is allowed to come out and the hut is set fire to. Then the ram is killed and portions of the meat are distributed to those present. Undoubtedly this is a relic of the Vedic sacrifice.

Now let us see whether in the Vedic times there was actually any sacrifice in the beginning of the new year. When the vernal equinox happened in the Mrigas'irā *nakshatra* its name became *Samvatsara* and *Yajña*. At that time both

the *varsha* (year) and the *yajña* (sacrifice) began. The sacrifice that then began was continued throughout the year. Hence *varsha* and *yajña* became synonymous. As the *yajña* was thought to create *prajā*, its cessation meant destruction.

In Vedic times the Rishis performed sacrifices at the time of the equinoxes and the solstices, both at Pūrṇimā and Amāvasyā. We have already seen that the New Year began from these times. On the day previous to the sacrifice fuel used to be collected and fire got ready. Similarly in Bihar nowadays people contribute their share of the fuel for the burning of the *Samvat*. The animal was killed on the day of the *yajña*. Sometimes *puroḍāś'a*, or a wheaten cake, was offered. Gradually, with the advance of rationalistic ideas, mimicry and representation came to be substituted for the animal sacrifice. Though an animal is not actually burnt nowadays at the Holi Festival and eaten, its effigy or its semblance in dough is burnt or thrown into the fire, or the escaped animal is killed and its meat distributed. The contribution of fuel and the eating of the sacramental meat by all present point to the solidarity of communal life at least in the near past.

Just as there is *merā-porāno* during the Holi Festival, so there is *merā-porāno* at the time of the New Rice Ceremony in the month of Agra-hāyana in some parts of Western Bengal. This shows that whenever the New Year began there was the sacrifice. Thus the New Year began with the sacrifice of an animal, the meat of

which was sacramentally eaten. The pig killed at the *Gāyḍāṇṛ* was the animal sacrificed at the beginning of the New Year's *yajña*, and the sacramental meal shared by the celebrants is the relic of a practice the memories of which have been long lost.

It has already been related that *Yajña* is *Prajāpati* and also *Samvatsara*; the *Aitareya* and *Śatapatha Brāhmaṇas* and the *Mahābhārata* agree on this point. As *prajā* had to be preserved, *yajña* was continued throughout the year and therefore *Prajāpati*, *Samvatsara* and *Yajña* became synonymous. But as with the *Mrigas'irā nakshatra* the year began, the two were associated. The description of the origin of *Prajāpati* given in the *Śatapatha Brāhmaṇa* (VI. 12) is the description of *Kālapurusha*, as it is called in Bengal, viz, Orion. The nomenclature is perfectly correct as the year is a measure of time (*kāla*) and *Samvatsara* or *Prajāpati* may well be so designated. In the *Śatapatha Brāhmaṇa* it is related that *Prajāpati* took the shape of a Boar and raised the Earth from the primeval deep. The *Vāyu Purāṇa* says that *Nārāyaṇa* in the *Varāha-avatāra* would be *Samvatsara* and *Yajña* (ch. 23 - *Tadā samvatsaro bhūtvā yajñarūpo bhaviṣhyati*). *Varāha* was regarded as *Kālapurusha*. Thus there was the association of the New Year (*Mrigas'irā*, *Kālapurusha*, *Samvatsara*) with the Boar and the *Yajña*. Curiously enough we find that pigs have the precedence in the procession of animals that pass through the dying embers of the bonfire kindled by the need-fire in Europe.

The beginning of the New Year in Mārgas'īrṣha was the beginning of the sacrificial fire in which an animal as *bali* was offered. In time with the New Year whenever it began the Yajñagni would be lit. In the *dōla*, therefore, we find the fire of the sacrifice, the *yajña*, the *samvatsara* or *samvat*. Ideas of fire and of lustration (*pāvaka*) gradually clustered round, and the burning of the *samvat* became the burning of the old year and all its impurities.

Holākā, according to one Purāṇa, is the sister of Samvat. She was a Rākshashī and ate children. Probably *Holākā* is a corruption of *ilvakā*, through *hīlvakā*, the three stars which formed the head of the Mṛigas'īrā *nakshatra*. With the rise of Holākā the month became unhealthy and hence she is to be burnt. This probably explains why throughout the month of Kārtika lights are lit, beginning with a sort of bonfire at the samkrānti day of Ās'vina. The time of the rise of Holākā or Ilvakā was forgotten, the idea of her being a witch or *burī* (बुरी) and that she must be burnt, remaining. She was burnt at another New year beginning, viz., Phalguṇa Pūrṇima or Dola Yātrā and gave her name to the Holi Festival.

It has already been related that the Rishis of the *Aitareya Brāhmaṇa* concocted a legend when they were surprised to find the vernal equinox occurring in Rohiṇī rather than in Mṛigas'īrā, that Prajāpati was attached to his daughter Ūṣā. The scandalised gods created Bhūtavan who pierced

the *akṛita* of Prajāpati, which went to the sky and became a deer. In course of time the legend sustained emendations and in the legend of Dakṣa Yajña we find that Śiva seeing that Dakṣa's head was burnt gave him (for consolation) the head of a goat. This is only a mask concealing the explanation of the physical phenomenon. Bhū-tavān became Rudra and then Śiva, and Prajāpati was Dakṣa. Prajāpati had already become Mriga. Dakṣa's head would be the head of *mriga* (deer) or a goat, and it looked like this in the heavens. From the goat to the ram the transition is easy. According to Prof. Yogesh Chandra Ray the legends in the Purāṇa can be interpreted to explain the heavenly phenomena. In fact Orion has been the source of numerous legends, and the Buddhists conceived their goddess Parṇas'avarī from the shape of Orion. "The Origin of the Goddess Parṇasavarī," by Rao Bahadur B.A. Gupte in the *Indian Antiquary*, Vol. LI (1922), pp. 143-44, may be read in this connection with interest.

How far the legends explain the several heavenly phenomena, and are accurate, I do not pretend to examine, for it is beyond the scope of this essay. It is enough for me if I have been able to show that the Gai-dāṇṛ festival was performed at the beginning of the New Year, and it was a kind of sacrifice, the purport of which was to bring good luck to cattle.

IV. THE PLACE OF THE KHASI IN THE WORLD.

By

DAVID ROY

The Khasi country lies in the hills of the province of Assam in North East India. Khasi clans are exogamous and matrilineal, and the Khasis speak a MonKhmer language.

In speaking of the place of the Khasi in the world I intend to explain the Khasi's own view of his relation to other peoples of the world.*

The Khasi is very conscious of his importance. He says a Khasi claims to be the centre of the world. The Khasi has acquired such a feeling of self-importance from his great confidence in himself; and this confidence he has derived from the position in which his relationship-terminology represents him as standing with respect to himself and the world around him. Or, rather, his relationship terms and language are an expression of his attitude and notions.

The Khasi says—*Ka Kamie* (mother)

Which is=His mother	<i>U Khun</i> (son)	<i>Ka Kamie</i> (mother)

Himself (male)		His sister (female)

He calls this the family. Then he says—

Ka Kamie Kha
(Father's mother)

<i>U Kpa Kha</i> (Father, Father's brother) (male)	... ..	<i>Ka Nia Kha</i> Father Father's sister (female)

he writer of this article is himself a Khasi (Christian).

He calls this the world. So a Khasi places his family on one side :—

<i>Ka Kmie</i>	<i>U Khum</i>	<i>Ka Kmie</i>
(Mother)	(Son)	(Mother)

which consists of his mother, himself, his sister, and, the world on the other side :—

<i>Ka Kmie Kha</i>	<i>U Kpa,</i>	<i>Ka Nia Kha</i>
(His father's	<i>U Kpa Kha</i>	(His father's
mother.)	(Father,	sister)
	brother)	

But he places himself again between that family and that world, and claims again :—

<i>Ka Nia Kha</i>	<i>U Khun Kha</i>	<i>Ka Bakha</i>
(Father's	(Father's son)	(Father's
sister.)	(Himself.)	sister's
		daughter)

Then he brings it nearer to himself and claims again :—

<i>Ka Kmie Kha Ma u</i>	<i>Ka Para Kha</i>
(Father's	(<i>u Khun Kha</i>)
mother)	(Himself,
	Father's son.)
	brother's daughter.)

Thus in the family—He stands between the mother and his sister ;—and outside in the world—His father—stands between his (the father's) mother and his (the father's) sister.

Thus in the world the Khasi stands between his mother and his sister, and between his father's mother and father's sister.

This happens when on the death of his uncle he stands between, and on behalf of, his sister and mother ; and, on the death of his father, he stands between, and on behalf of, his father's sister and his father's sister's daughter.

On the death of his father's younger or elder brother he stands between, and, on behalf of, his father's mother and his father's brother's daughter.

The Khasi's interpretation of his life is this,— 'long jaid na ka kynthai,' i.e., from woman sprang the kind, or species; 'U kha uba ai ka rynieng,' i.e., it is the father who gives the stature or person. Thus, the mother produces the kind or species, and this kind 'ka jaid' springs and remains in the man's own house ('ha laing') by his mother, and is continued by his sister and his niece, sister's child. The stature or person, is produced, crystallised and is endowed with power and fortune, that is, with power to resist forces which affect a man's capacity to grow in power and in fortune, by his father, father's younger brother and father's elder brother, and by the father's nephews.

Thus the Khasi says all those who spring from the same womb are his kind, '*jaid-u sang*'; that is, they are forbidden as 'sacred' because, he says, they are suckled of one and the same breast. They are '*sang jaid*.'

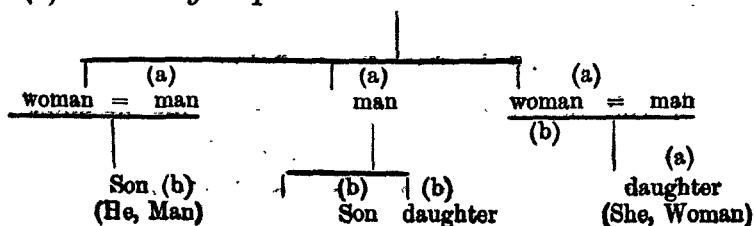
Again, he says, all who receive or derive retrospectively their stature from the common source which gives birth to man's body—*u sang*, that is, they are tabooed or are sacred as they come out or spring or are generated from one navel-string (umbilical cord), *u sohpet kha*. They are '*sang sohpet kha*.'

(a) = *Sang jaid*

Table Woman

(1)

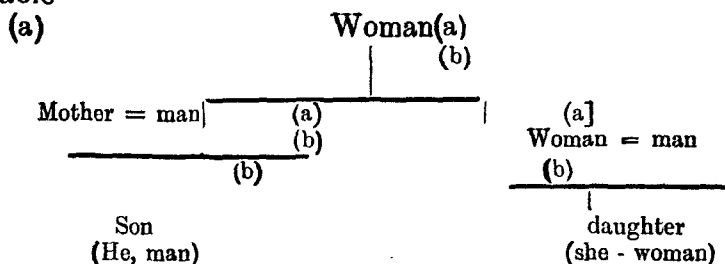
(b) = *Sang sohpet kha*.



Thus the Khasi says, "I do not marry (and I cannot even think in this wise of) my own mother, my own sister. They are of the (a) group. I cannot think like that of my father's mother (kmie kha), father's sister (nia kha), father's brother (kpa kha), father's brother's children (para kha). They are of the (b) group." On his mother's side *u sang jaid*, that is, he is *sang* or forbidden as being of the same clan, kind, species. On his father's side *u sang sohpet kha*, that is, he is *sang*, forbidden as being of the same umbilical cord.

Then he finds only himself and his *bakha* (cousins, the children of his father's sister),—he being the son of a man born of one woman, and they the children of the sister of that person, born or whose 'statures' were generated from one man.

Table



Thus the *a* woman and the *a* daughter and all those between these two and those after these two, join to the *a* woman in life through the two primary stages of life in its essence when it was sustained through the umbilical cord and later by the woman's breasts.

So the *a* woman and the *b* son and all those between the two and those after these two,

join to the *a* woman in life through only one of the primary stages in the life essence when it was sustained through the umbilical cord.

Thus the connection of the *a* group is sustained to a much longer period and greater intensity in its life-formation to the *a* woman, than the *b* son.

Hence we have the double means of sustenance of life producing, through the umbilical cord and the breast, the single group *a*, while the single connection of life-formation through the umbilical cord produces a double *a*+*b* man-woman connection with the *b* son.

Thus he stands alone in the centre and he places his *jain na ka kpoh* (the kind which springs from the same womb), that is, those of (*a*) group (see tables) on one side, and he places his *kha* or those connected, or sprung of, the one umbilical cord, that is, those of (*b*) group on the other side. On the other side is *ka rynieng ka rngiew*, the 'stature', the person from which he also derives his. Then the Khasi calls the source (*thymmei*) from which he springs, *ko kur ka rngiew* (stature, person) *ki kha na uwei u sohpet* (those connected or sprung of one umbilical cord).

Thus the Khasi has his house of *ki kur ki jaid* the relatives of his kind and species, and his world of *ki kha ki man*, relatives of other people's kind and species with whom they are able to propagate human life.

This interesting Khasi fabric of human relationship between man and his mother and father, of the connection between a man and his fellow-

human beings all over the four quarters of the globe (*ehi snieh ka pyrthei*) with whom, in the world, he can give in marriage and take in marriage, shows the nature which is believed to be innate in the Khasi, and his supposed power of moulding the world. His nature is to grow and to resist, to extend and spread out. It is against his idea of life to remain narrow or limited and resourceless. He is not to be made small or made an orphan, it will not do for him and his idea of the world to '*sah khlem khun kelem kti*,' stay without kind and species, without child, without issue. A couple would even seek to separate if there are no children of the union. His idea is, so to say, 'imperialistic,' to sow and spread out. As I wrote elsewhere, "A Khasi marries men and women of all races; to his Khasi parent the issues are all one and the same without any distinction of caste or creed or colour or possessions. The children are the '*khun kha*' (*khun* = child, *kha* = born, i.e. children who are born through the union of a descendant of the parent with a descendant of another parent), and these children are unified into families and are assimilated, in the Khasi idea of life, while these groups of families are traced to their mother and are made to revolve on this ancestress as the pivot of their existence."

Thus the Khasi shows :—

One one side - mother

|
Son—mother
which is, - mother

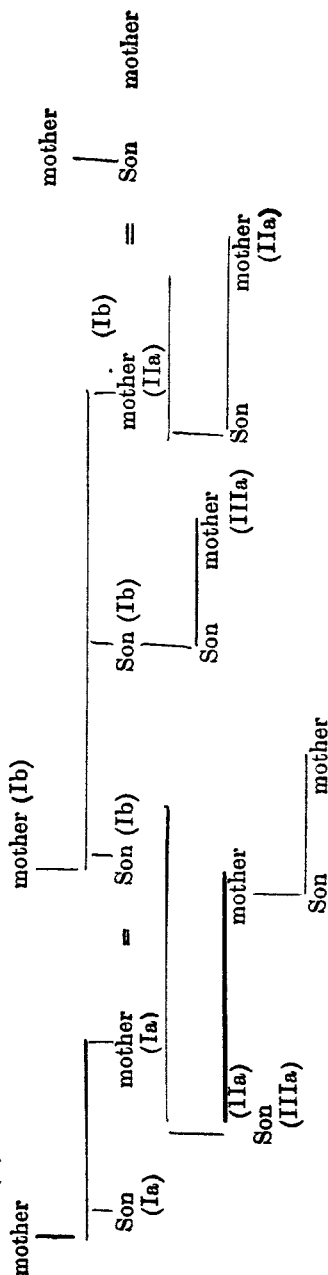
|
_____ the son of one's own - his kinswoman
On the other side also he shows -- mother

|
Son - mother
which is - Father's mother

|
_____ the son of others his kinswoman

In their midst the Khasi places himself always as the son of the world, thus—

Table (3)



Family-- { mother (Ia) Son (Ia) mother (Ia)
 { The mother who bears (Ia) The son of her own (Ia) The female relative (Ia)

The world-- Father's mother (kmie kha) (Ib) Father's brother (u kpa kha) (Ib) Father's sister (ka nia kha)

For the species to increase and continue he says, Here—

The mother to bear and give birth—	—	The son of others	The aunt <i>ka nia kha</i> (father's sister)	} Ia Ib
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For the house to continue and the world to remain he says, Here—

The aunt <i>ka nia kha</i> (father's sister)	—	The son <i>u khun kha</i> (son of brother of <i>ka nia kha</i>)	The ousin <i>ka bakha</i> (dau- ghter of <i>ka nia kha</i>) fa- ther's sister)	} Ib IIa
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For the person (*rngiew*) to crystalise, and the stature (*rynieng*) to remain he says, Here—

father's mother (<i>ka kmie kha</i>) —	The son <i>u khun kha</i> (son of brother of <i>ka nia kha</i> , who is grand- son of <i>ka kmie kha</i> (father's mother)	The cousin <i>ka para kha</i> (daughter of father's brother)	} Ib IIIa
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The Khasi knows the 'sang' (*sacra*, sacred, that which is forbidden as sacred). He has experimented and therefore he says *ka sang iap* (*lit.*, that which is 'sacred' or forbidden or taboo unto death) in the case of those who committed incest in the same *jaid*, kind, species, that is, those of the *a* group. It is sacrilege. There is no greater punishment than for this sin,—a punishment so severe that the Khasi will not permit the bones of these transgressors to enter the family cairn. Similarly they regard as an act of sacrilege for children of brothers (*shi para kha*) to inter-marry. Thus the Khasi regards as 'sacred', that is, forbidden or tabooed, for those who are sprung of or connected through the same womb, and for those who are generated of and are suspended from or strung to one umbilical cord in origin, to marry. That is they regard as *sang* for the *a + b* man - woman group to marry the *b* son. [see Tables (1) & (2)].

The Khasi knows the 'byrsieh'. The word *byr* means 'to appear', and, *sieh* means foul, thus *byrsieh* means to defile or corrupt; and '*tep*' means cover, *byrtep* means to cover, to spread over. Hence *ka byrsieh ka byrtep* means something which spreads over and makes everything foul, defiled and corrupt. Khasis regard marriage even in the case of cousins as not the right thing (*lit.*, not good), the *khun kha* (son of the son) that is the *b* son and his sister to give the seed to the house of his *kmie kha* (mother of the son, i.e. father's mother), that is, the house of the *a* group. Thus no seed, e.g., seed of trees, rice, cucumber, pumpkins, *shriw* or Job's tears, or millet, are taken from the children of the son by the family of the mother of that son, that is, no seed is taken from the children (*ki khun kha*) born of the son by his mother and sisters. Any seed given by these grand-children born of the brothers must be paid for if taken by his mother and sisters.

Thus Khasis do not consider that it is good for children of the brothers to marry the children of the sisters, though they are cousins, i.e. for III (a) to marry II(a). They believe that there will be misfortune and that they will not thrive. They consider it is better that the brother of II(a) marries the sister of III(a). In the case of these nearest cousins, however, they avoid such marriages so long as I (b), the father who is the uncle of II(a) is alive. [Table (3)]

Khasis do not consider it the right thing (regard it as 'bad') for the elder or younger brother of the wife to marry the elder or younger sister of

the husband. Whichever side is *jem ka rwiang* (lit. whose person is less strong, less able to resist the evil) will suffer death. The word *rwiang* means more than literally 'fortune.' The word *rwiang* goes with *rngiew* and the two are coupled together as *ka Rngiew ka Rwiang*. *Rngiew* is the person, the man's 'ama'. 'Rwiang' is the encircling power produced by that person, hence *jem ka rwiang* means the power encircling the man's person becoming easy of being conquered or subdued. (*Jem* = easy, pliable.)

In a word, the Khasi's idea of himself is that he stands in the middle of the world. We do not find terms in the languages of peoples with the family system to express varieties of relationship to the extent that we have in the Khasi vocabulary. Some of the other languages content themselves with terms for father, mother, uncle, aunt, cousin. They have no words to differentiate the classificatory-descriptive system of terms showing relationship with mother, mother's elder and younger sisters (*mei, mei san, mei nah*); father and his elder and younger brothers (*kpa, kpa san, kap nah*) and father's brother's children (*para kha*), father's mother (*mei kha*), mother's mother (*mei rad*), wife's brother (*kynum*), husband's brother (*kong*), and so on. We find in the Khasi sociology, departments of social organization indicating the attitude towards life which is peculiar to the Khasi. The terms are not mere names but serve to show well-defined groups based on an idea of their special functions. As Dr. R. R. Marett says, "Exogamy, and everything

else that we do is instinct with a *plus*; and for the student of religion or of human culture in any of its forms, to account for that *plus* is the sum and substance of his task.....Whereas, then, there is likelihood that any *a posteriori* reason existed for believing that in-breeding makes for sterility, if indeed it be true in fact at all, there might well have been an *a priori* conviction to much the same effect 'based simply on a fear that to tamper with the fountain-head of human vitality would somehow cause it to dry up.' The Khasi stands in the world as exogamous in his rule of life, and he says '*sang bad byrsieh*', that is, endogamy is forbidden and if it should ever be committed it will render life defiled and corrupt. He says this out of the fear of the knowledge that any act of carelessness in the prohibited area of the source of human life and vitality, which is in the Khasi phrase '*long briw*' (*long* is to be or become, *briew* is man, i.e., to be or become man), will make that source of human life to dry up. So he says, '*duh I jaid I khong*' (*duh*=is exterminated; *jaid*=kind, species; *khong*=root).

In refutation of such aspersions as that the Khasi has no rules of marriage, I shall quote the most sacred pronouncement the Khasi when two persons, the man and the woman, are initiated into that state. Calling upon the name of God the Khasi says—"U Lei thaw briew man briw, u' Lei ne ka '*Lei synshar*', (God who creates man and is the source of human life, God who keeps, controls, preserves), "*Hei ko Blei na jrong, Ko*

Blei na tbian, ko Lei Synshar, Ko Blei triw, man briw, kumba la hukum kumba bhu ma phi U Blei ka Blei ban long I Kha I man, kumba la pynhiar ka synjat mynta ka sgni, ba phin tip, ba phin sngew na jrong ho kyndiang ba ita I jaid bad ita I jaid ki la iapoi kha poi man ban iaroi ban ia man ban ia heh ka long kynthei ka long shynrang', Oh God from above, oh God from below, Thou God who controllest, who keepest and preservest, Thou God who createst man and the origin and source of human life,—as ordained by Thee, Oh God, U Blei (God in the male aspect), Ka Blei (God in the female aspect) that there should be *I Kha* (person to bear and give birth) *I man* (person with whom and through whom to give cause to life and to grow), as token has been brought down this day, [a ring is given], so that Thou mayest hear clearly from above, that such and such *jaid* (kind, clan) and such and such a *jaid* (kind, clan) have become joined in marriage in order to increase, in order to grow, so as to increase the state of being female and the state of being male (i. e. male and female population).” [This is said as a woman of a certain clan always marries a man of a different clan.] As I have said elsewhere, “There is no tradition among the Khasis that there was ever a time when the status of marriage did not exist among our ancestors. There is a belief among the Khasis that they were instructed in their religion and that their ceremonies and rites were delivered by God Himself to the

Hynniew Trep Hynniew Skam (the seven nests, seven roots). These seven nests or roots were seven pairs of virgin women and men created by God to marry and they formed seven houses (families) and from them the country was filled and the rites and ceremonies were obtained. Thus the Khasi takes pride in the fact that God Himself delivered their religion and the rites and ceremonies unto them. ... The Khasi matrilineal system has come down through ages and with a definite idea of the union of one man with one woman. This is significant for those who consider that marriage is and has always been common to the whole human race, and it raises the question as to whether the Khasi idea is the survival of a period when the nature of paternity was not understood".

In the sacred rites of baptism of this simple folk we find that a Khasi grandmother will not officiate in the name-giving ceremony unless in the marriage of her son with the woman to whom the child is born there has been the regular ceremony of marriage.

V. THE BACTERICIDAL ACTION OF THE WATER OF THE GANGES AND JUMNA RIVERS ON THE CHOLERA MICROBES.*

By

E. HANBURY HANKIN, M. A., SC. D.

(Late Chemical Examiner to Government for the United Provinces and the Central Provinces).

The sanctity accorded to the Ganges and the Jumna by the Hindus is well known. To the foreigner and to most English-educated Hindus this reverence for the water of these rivers may appear to have been carried to unreasonable lengths. When one sees to the course of the Ganges or the Jumna, where it passes through a large town, thousands of the inhabitants washing themselves, their cattle and their clothes in the turbid and muddy water, when one remembers that frequently half-burnt corpses find their last resting-place in these rivers, it is excusable to think that their waters must be dangerous to drink and that the veneration of Hindus for their sacred rivers is a proof of their ignorance of all ideas of sanitation or cleanliness. This is the view hitherto held by European authorities as regards the spread of cholera; they have been

* This article originally appeared in French in the *Annales de l'Institut Pasteur* for 1896, page 511ff. We are indebted to the Editor of that Journal for permission given to the author to publish this translation. A few explanatory notes have been added by the author.

ready to consider the Ganges as the principal agent for the transmission of the disease in its country of origin and as the nidus of the microbe. Recent scientific experiments, however, would appear to indicate a demonstrable basis for the superiority ascribed to the water of these rivers over those of most other rivers.

A simple microscopic examination of the water of either of these two rivers reveals a remarkable difference between them and the water of European rivers of the same degree of turbidity. In the latter, one finds abundant animal and vegetable debris, numerous microbes and living animals and vegetables of microscopic size. The water of the Ganges or the Jumna, on the contrary, shows but rarely any traces of organic matter, except perhaps in the immediate neighbourhood of a bathing *ghat* or just below a town. The turbidity of the water is almost entirely due to small particles of sand or mica. Bacteriological examination proves that the microbes are far less numerous than they are in European rivers of the same size. The Indian rivers in question are for the most part free of water-weeds or any form of vegetable life.¹

A closer examination reveals numerous reasons for this comparative bacteriological purity. In India there are no large sewerage systems emptying into the rivers. Certainly in the larger towns there are surface drains that lead to the adjacent rivers but during the greater part of the year

¹ See "*On the Microbes of Indian Rivers*" communicated to the Indian Medical Congress held in December 1894.

their flow is negligible. Equally rare are chemical or other factories which in Europe may be found on the banks or rivers and contributing pollution to their waters. The best protection of the Indian river waters, in the region with which I am best acquainted (the central part of the Gangetic plain), is the fact that their banks are fringed by zones of sterile country often one or two miles in width, and usually cut up into ravines in which villages are met with but rarely. After having received pollution from some large town, the river remains free from further appreciable pollution of a like nature until it reaches the next town which may be one or two hundred miles down stream.

There are only two villages, for instance, on the banks of the Jumna in the twelve and a half miles of its course below Agra. There are only three within 23 miles upstream and probably none of these villages contain more than 500 inhabitants.

Thus the recognised self-purifying power of the river water that depends on the action of air and sunlight might be expected to be more active in India than in Europe. The larger rivers of the United Provinces flow in thin layers in a winding course over sand-banks and therefore under the best conditions for the action of light and oxygen on their waters, which factors we may expect will be aided in their action by the usually high temperature.

The water of these rivers comes, during the greater part of the year, not from rain or surface

drainage but from the melting of snow on the Himalayas. Hence from its origin their water is likely to contain fewer microbes than is the case with European rivers which are fed by rain water coming from the surface of cultivated land.

At the beginning of the hot weather, on one occasion when the water level was exceptionally low, the Jumna water was found to contain :—

56 to 76 microbes per c.c. at a point 5 miles above Agra,
700 to 750 " " " " just above the town,
3,000 to 25,000 " " " below the town.

From this point below the town the numbers of microbes present decreased rapidly until $12\frac{1}{2}$ miles downstream, only about 130 microbes per c.c. were found. At a slightly later date (4th April) when the river was still lower and the current still less, the number of microbes in the water collected below the town was always more than 100,000 per c.c. But three miles further down stream, the number was not above 100, while figures of 26 and 80 were found for water taken $12\frac{1}{2}$ miles below the town. These figures indicate the presence of a remarkable self-purifying power.

The following figures show the numbers of microbes per c.c. in water collected at the intake of the water-works in Agra. Each figure is the mean of at least three experiments :—

January	1,680	Cold season, occasional slight showers
February	1,084	
March	1,133	
April	580	Hot dry season
May	662	
June	725	
July	2,900	Rainy season
August	3,146	
September	1,033	
October	2,183	Cold dry weather
November	856	
December	1,016	

Owing to the fact that certain impurities from a village reach the water just above the intake, the figures are higher than would otherwise be the case.

These observations that show the comparative bacteriological purity of the Ganges and its affluents do not throw any light on the question that for long has been a great difficulty in admitting the water-borne theory of cholera.

The fundamental law of the spread of great Indian epidemics of this disease is that commencing in Bengal they travel up country in the contrary direction to the flow of the rivers. The epidemics never, it is asserted, travel down stream. How can this be explained if cholera is a water-borne disease? How is it that when cholera breaks out at a place of pilgrimage on the bank of one of these rivers, it does not attack villages on the river bank down stream, except in cases in which it is introduced by returning pilgrims?

One cannot explain this remarkable fact by supposing that the cholera microbe does not reach

the river water. It is true that Hindus do not, as a rule, use the actual edge of the river for depositing dejecta owing to their reverence for the water as sacred.² But though this source of pollution is absent, there are many others. A microbe undistinguishable from that of cholera has been found by me in the water of a drain in the Agra city that was flowing into the Jumna river. Washing of clothes and bathing are other sources of contamination. Microbes apparently identical with those of cholera have been found by me in specimens of Jumna and Ganges water collected at bathing *ghats* during pilgrim festivals at Allahabad and elsewhere. But the most obvious source of infection is the custom of throwing cholera corpses into the stream.

Ordinarily corpses are partially at least burnt before being thrown into the sacred river. But in several districts cholera corpses are often thrown into the river without any such preliminary purification.

Such considerations pointed out the desirability of investigating the fate of cholera microbes when placed in the water of these rivers. In the first place, it seemed to be possible that the water of the Ganges and the Jumna could not support the life of the cholera microbe owing to the lack of certain nutritious matters. The following experi-

² Indian villagers have no scruple in depositing such pollution a few feet away from the bank. Melons grown on sand banks during the hot season are often manured with human dejecta, a practice that offers a possible source of pollution for the water.

ments carried out to test this possibility led me to the discovery that *the water of these rivers contains an antiseptic that has a well-marked power of killing the microbe of cholera.*

This effect was only slightly marked in my first experiments, because, as I understood later, the water tested had been sterilised in an autoclave. The decrease or removal of bactericidal power by this treatment is illustrated by the following example. In this and in succeeding experiments, the word "heated" is intended to mean that the specimen has been heated for half an hour in an autoclave to a temperature of 115 Cent.. To water, thus heated, coming from various sources, cholera microbes were added. The numbers then present in the samples tested were estimated immediately and also at intervals by the usual colony-counting method. The following figures were obtained :—

Numbers of colonies obtained after :—

	0	1	2	3	4	5	24	48 hours
Jumna	12,500	20,000	17,5000	30,000	32,000	26,000	4,000	5,000
Tap Water	14,000	17,000	17,5000	21,000	20,000	19,000	17,000	15,000
Ganges	10,000	8,000	12,5000	5,000	13,000	20,000	18,000	15,000

Thus in the Jumna and Ganges water and in Agra tap water (which is derived from the Jumna) no great change in the numbers of added cholera microbes took place.

Now let us see the different result when heating in an autoclave was replaced by filtration through a Pasteur filter.

Numbers of colonies obtained after :—

	0	1	2	3	4	25	49 hours
Ganges filtered	5,500	3,500	200	0	0	0	0
" heated	6,000	5,000	6,000	6,400	4,000	3,800	15,000
and filtered	}	8,500	8,000	7,500	10,000	80,000	4,000
Well water							
" filtered	}	7,500	10,000	12,000	14,000	16,000	30,000
Well water							
" heated							

One sees that Ganges water not heated, in this experiment, kills all the cholera microbes added in less than three hours. The same water heated lacks this power. Well water, whether filtered or heated, was found to be a good food medium for the microbe. In this and the succeeding experiments a Pasteur filter was used for the filtration. In each experiment numerous control observations were made to prove the purity of the cultures and sub-cultures.

The following experiment was designed to test whether the bactericidal action was due to the absence of nutritive matter. Distilled water, which presumably contains no nutritive matter, was found to have no appreciable power of killing cholera microbes under the conditions of the experiment.

The details were as follows :—

	Number of colonies contained after					
	0	1	2	3	4	24 hours
Water of	}	4,200	800	0	6	0
Jumna filtered						
Distilled water		4,500	5,000	6,000	5,500	200
						12,000

In other experiments it has often been my experience that cholera microbes perish when placed in distilled water but this never happens so rapidly as in the filtered waters of the Ganges and Jumna. Ordinarily the water in my experiments was sterilised by filtration. In order to be sure that the bactericidal power was not due to this treatment, an experiment was carried out in which unsterilised Jumna water was infected from cholera culture. Traces of this infected water were added at intervals to peptone media and it was found that within four hours no evidence of survival of the cholera microbes could be obtained.

To give every possible advantage to the cholera microbe in the following experiments, a culture was employed that had been made in sterilised Jumna water to which peptone and a trace of alkali had been added. This medium was inoculated two or three days before the actual experiment, a fresh culture in the medium being made daily. By this means an attempt was made to acclimatise the microbe to living in Jumna waters. In this way it was hoped to avoid any ill effects that might possibly (but not probably) accrue from a brusque passage from a rich culture medium to a poorer one like river water. The cholera microbe is not very sensitive to such changes. The enteric bacillus is more so as has been shown by Haffkine (*Annales d' l' Institute Pasteur*, 1890, Vol. IV, page 363). Nevertheless this bacillus is not killed by transference to Jumna water, under laboratory conditions, as proved by the following experiments :—

Number of colonies

after :—	0	1	2	3	4	24 hours
B. Typhi acclimatised in bouillon and then placed in :—						
Well water	500	100	100	150	100	20,000
Tap water	250	50	100	50	50	15,000
B. Typhi acclimatised in water and then placed in :—						
Well water	800	600	100	200	250	50,000
Tap water	900	100	200	150	100	90,000

The enteric bacillus used in these experiments had been acclimatised by placing it in bouillon or water three days before and by making fresh cultures in these media daily. The tap water is derived from the Jumna, as already explained, and ordinarily exercises a bactericidal action on the cholera microbe.

The effect of heating on Ganges water has been described in an earlier paragraph. The following experiment shows the effect of heating on Jumna water. The cholera used in this test was Haffkine's cholera vaccine.

Number of colonies

after :—	0	1	2	3	4	25	49 hrs
Water of Jumna filtered }	2,500	1,500	1,000	5,000	0	0	0
ditto	5,000	4,000	3,000	3,000	2,000	0	0
Jumna heated and filtered }	5,000	4,000	6,000	5,000	6,000	10,000	36,000
Jumna heated	6,000	5,000	4,500	4,000	4,000	3,000	8,000

The Haffkine's cholera vaccine used in the above experiment was of non-Indian origin. It was necessary to find out whether the waters of the Ganges and Jumna would have the same action on microbes of cholera from an Indian source.

In order to test this point, a microbe was used that had been derived from a cholera epidemic in Bellary (Madras Presidency). The following results were obtained :—

		Numbers of colonies after :—					
hours		0	1	2	3	4	25
Bellary cholera in :—							
Jumna filtered		8,000	4,000	3,000	100	0	0
ditto		6,000	5,000	1,500	0	0	0
ditto		9,000	5,000	1,000	160	0	0
Tap water } filtered		7,000	1,200	100	0	0	0
ditto		8,000	1,000	200	0	0	0
Ganges filtered		8,000	6,000	6,000	8,000	12,000	21,000
ditto		6,500	7,000	7,000	1,000	12,000	24,000
Haffkine's vaccin in :—							
Jumna filtered		10,000	3,000	150	0	0	0
ditto		8,000	2,000	100	50	0	0
ditto		10,000	1,500	150	100	0	0
Tap water		7,500	3,000	150	50	0	0
ditto		7,000	4,000	100	0	0	0
Ganges filtered		9,000	3,000	1,250	4,000	2,000	20,000
ditto		8,000	5,000	4,000	2,500	3,000	25,000
Well water as control :—							
Bellary cholera		7,000	8,000	10,000	10,000	20,000	18,000
ditto		8,000	10,000	11,000	10,000	16,000	16,000
Haffkine's vaccin		9,000	8,000	3,000	4,000	9,000	28,000
ditto		8,000	8,000	2,500	2,000	6,000	25,000

In the above experiment Jumna water killed cholera microbes that were put into it whether taken directly from the river or whether it had been submitted to sand filtration at the Municipal Waterworks. The result was the same on microbes of cholera that came originally from Tonkin and on cholera microbes obtained from Bellary. On the contrary Ganges water in this case was destitute of bactericidal power. In order to avoid a possible source of error, all the test

tubes used to contain the different samples of water submitted to the test were new ones recently arrived from Europe which had been washed with tap water and had had no other treatment. This precaution was taken in many of my experiments though no positive evidence existed that it was necessary.

In yet another experiment Ganges water showed itself innocuous to the cholera microbe. My belief is that this result was due to the fact that before arriving in my laboratory it had to undergo a long railway journey and that 50 to 60 hours elapsed between the time of having its been taken from the river and its being used in these experiments. A reason for this belief is furnished by the following experiment in which Jumna water on keeping practically lost its action on the cholera microbe. The specimens described as "kept" had been placed in a receptacle for several hours before the experiment :—

Number of colonies after :—

		0	1	2	3	4	29	hours 53
A.	Water kept in bottle }							
1.	Tap water filtered }	3,000	1,800	15,000	15,000	1,800	7,000	18,000
2.	Tap water boiled }	3,600	3,000	800	4,000	750	10,000	22,000
B.	Water kept in tin							
1.	Tap Water filtered }	3,000	1,300	1,600	1,000	700	24,000	8,000
2.	Tap water boiled }	2,900	3,200	2,800	3,000	3,000	36,000	30,000
C.	Fresh samples							
1.	Tap water filtered }	4,000	1,5000	750	250	50	0	0
2.	Tap water boiled }	4,000	4,000	5,000	5,000	5,000	6,000	18,000

As a criticism of the foregoing experiments it might be suggested that possibly the microbes had not been actually killed by the Ganges and Jumna waters but merely so changed that they could no longer form colonies in the agar-agar jelly used in the tests. To obviate this objection, on several occasions peptone and alkali were added, in suitable amounts, to the apparently sterile mixture of Jumna water cholera microbes, at intervals of 5 to 25 hours. Previously it had been found that such addition of peptone and alkali completely removes from Jumna water all its harmful action on the cholera microbe and, on the other hand, the solution of peptone is the best culture medium known for this microbe. Since the test tubes of Jumna water thus treated remained sterile, we have an adequate proof that the cholera microbes previously added had been really killed. These test tubes two or three days later were inoculated with cholera and then produced good cultures. The medium therefore was favourable.

It has been shown above that Jumna water loses its bactericidal power on heating. One may ask, therefore, whether the bactericidal substance is destroyed by heat or whether it is a volatile substance that is driven off by boiling. To test between these alternatives, Jumna water was heated in hermetically sealed tubes; under such conditions it should lose its action on cholera if the bactericidal substance is one destroyed by heat and it should retain its activity if it is due to a

volatile substance which is unable to escape from the sealed tube, provided that latter is only opened when cold. That the latter alternative is the case is shown by the following experiment :—

Number of colonies after—

Water of :—	hours							
	0	1	2	3	4	5	24	48
Jumna heated in hermetically sealed tube	2,100	150	50	0	0	0	0	0
ditto	1,500	50	0	0	0	0	0	0
Jumna filtered	1,000	450	300	350	50	0	0	0
Jumna heated in open tube	1,800	1,000	1,250	600	1,900	1,500	3,800	2,500
Well water filtered	1,000	800	500	750	800	900	1,800	1,000

A similar result was obtained in the following experiment :—

Number of colonies after—

Water of :—	hours					
	0	1	2	3	3	24
Jumna heated in closed tube	4,200	1,100	0	0	0	0
ditto	3,500	100	0	0	0	0
Jumna heated in open tube	4,000	3,500	5,000	4,500	5,000	22,000
Jumna heated in open platinum dish	5,000	3,750	4,000	5,000	4,500	3,000
Distilled water	4,500	4,000	6,000	5,500	200	12,000
Jumna filtered	4,200	800	0	0	0	0

These two experiments show that Jumna water heated in closed vessels remains capable of killing cholera microbes and that it loses this power when heated in a vessel closed by cotton wool or in a shallow platinum dish.

In the second of these experiments the water had been obtained at Kailasi Ghāt a place situated about 22 miles (by river) above Agra. Thus it is not only in the neighbourhood of the town

that the bactericidal power is manifest. Further my experiments have been carried out at all times of the year except during the rains, thus proving that the bactericidal action on cholera is not merely an occasional phenomenon.

During the hot weather the whole of the Jumna river water at a point some 200 miles above Agra and a few miles below Delhi, is deflected into the Agra-Delhi canal. The joints of the dam by which this is done are caulked so that there is no doubt that the deflection is complete. This procedure does not result in the river drying up. Subsoil water appears in the bed of the river owing to the fall in the level of the latter during its course and suffices to maintain a slow current. Under these conditions the water shows the same bactericidal power as it does when the water is mainly derived from melting of the snow on the Himalayas. The subsoil water that is found in wells and when in wells, as already shown, it has no bactericidal powers. The antiseptic property that the river water ordinarily shows appears, therefore, either to be formed in the river or received by it *in situ*. The same substance appears to be present in Ganges water. It is improbable in the highest degree that it exists in mountain streams in the Himalayas or in rivers in other parts of India whose waters are known to be capable of transmitting the infection.

It appeared to me to be of importance to

learn whether Jumna water had the same bactericidal action when collected below and above the town of Agra. It also appeared to be worth testing whether the practice of throwing cremated or partially cremated corpses into the river had any effect on its bactericidal power. The following experiment furnishes an answer to these questions.

Number of colonies after :—

Water of	hours						
	0	1	2	3	6½	21	45
Jumna from above the town }	1,200	200	0	0	0	0	0
Jumna from below the town }	1,500	0	0	0	0	0	0
Jumna from below the town & near a floating corpse }	1,250	50	0	0	0	0	0
ditto	2,000	500	0	0	0	0	0
Jumna from above town heated }	1,250	1,200	0	0	0	0	0
Jumna below town heated }	1,000	2,000	0	0	0	0	0
Well water heated	1,200	1,250	1,700	1,200	1,500	3,000	16,000

Thus in this experiment no proof could be obtained that either the impurities coming from town drains or substances that might be derived from half carbonised corpses had any effect on the bactericidal action of the water on cholera microbes.

Although the scientific interest of the above results may seem to be limited by the fact that the nature of the bactericidal substance is, as yet, undetermined, the experiments are of interest in that they serve to explain why in India cholera is not carried downstream by the Ganges and similarly constituted rivers. Practical applications

of the above results at once suggest themselves. For instance pilgrims to sacred places on the banks of the Ganges and Jumna might with advantage be advised to drink the river water and to avoid that of wells. This, no doubt, would be a welcome ordinance as Hindus regard the water of these rivers as sacred and also as beneficial to health.

P. S.—The nature of the bactericidal substance in Ganges and Jumna water was obscure at the time the above paper was written. At the present day a plausible suggestion can be put forward as to its nature. It is now known that hydrogen peroxide—a powerful antiseptic and oxidising substance—is formed whenever water containing salts evaporates in the presence of sunlight. The self-purifying power possessed by large rivers is probably largely due to peroxide formed in this way. In most rivers so much organic matter is present that the peroxide is rapidly destroyed. In the case of the Ganges and Jumna water, water weeds are practically absent, possibly owing to some action of the micaceous silt suspended in their water. Other forms of vegetable pollution, as described above, are only present in minute amounts. Hence the peroxide that is formed by the action of sunlight on the water flowing often in shallow layers, is able to concentrate its action

on the microbes that reach these rivers. Thus may be explained both the remarkably small numbers of microbes usually found in the water of these rivers and also the special action of such waters on the microbe of cholera.

The late Dr. Pestonjee Ghadially, when working in the Agra laboratory, attempted to test this suggestion by trying whether the bactericidal power of Jumna water was removed by substance that destroy peroxide. It is known that permanganate and peroxide, when mixed, mutually destroy one another. He commenced with this substance and found that the addition of a minute amount of permanganate, an amount far too small to give any appreciable colour to the water, completely removes the bactericidal action on the microbe of cholera. Unfortunately Dr. Ghadially was unable to proceed further in this research owing to his transference from Agra.

VI. A MUNDA FOLK-TALE.

(Collected and translated by P. K. Mitra, M.A., Bihar
Provincial Civil Service.)

Haram-Burīa-kinga Kahani.

[*Story of the Old Man and Old Woman.*]

Bārōṛ hārām burīa-king tākenā. Enkingā

A couple old man old woman there was. Their
hoganāṇa ko kāko tākenā. Enking siu chakutan
children not there were. They plough and dig
tākenā-king. Hārām dināki siuz senotān
used to The old man every day plough-to going
tākenā. Orō burīā dināki

used. And the old woman every day
landia tikin dipli māṇḍi idiāi
lazy man meal time (= morning) rice to carry [to him]
tāne tākenā. Musing hulāṅ tuyukō burīakē

used to. One day jackals the old woman-to
māṇḍi iditānko lelki'a. Dolā bu ili māṇḍi
rice carrying-they saw [her.] Come let us beer rice
bu rēia. mente ko jagar keda. Sobenka
we will snatch, saying they conversed. All
nirkedako. Orō burīā kō kājiāitānā. "E
ran. And old woman they said to her, O

āji ! E āji ! Chikanām idijādā ?
grand mother ! O grand mother ! what are you taking?
De-le lel-lea. Orō soben tuiuko māṇḍi ko
Let us see. And all jackals rice they
chirānārā kiā oṛo soben māṇḍi ko jomchābatadā.
snatched away and all rice they ate up.

Burīā rātān sulitān lo hārāmtāe
The old woman weeping sobbing whilst the old man

seſerlena. Oſo ſoben kâji hâſamē
 to ſee arrived. And all facts to old-man-ſhe
udubâia. Hâſam iſue khisi jâna
 reported to him. Old man very much became angry.
oſo enko dale monekedâ. Eſa hulang buria
 and thoſe beat reſolved. The other day the old
ke ſine kul ki'a. Bote ta i'ae
 woman to-plough he ſent her. She put on a *langoſi* (loin
oſo bed'tâiaie. Ae do *buria*
 cloth) and a turban. He, on the other hand old wo-
liſate liſajânâ. Oſo lândia tikin dipli
 man's cloth-he put on. And morning-meal time
mândi e dupilkedâ oſo e ſenojânâ.
 rice he carried on the head and he went.
Horârê tuiuko hâſam ko kâjiai tânâ: E
 On the way jackals old man they ſay to him: O
aji! E aji chikânâm idijadâ.
 grand-mother! O grand-mother! What are you carrying?
De le lel lea." *Enlôge nir hundi lena ko mendo*
 Give us, let us ſee." At once ran up they but
hâſam miâd' ſoſa e ukuâkâd tâkenâ nañrê
 old man a ſtick he concealed had kept near
rikad' koae oſo iyah danal e
 allowed them he (to come) and ſuch beating-he
dalked koa chi nir hoſa kâ ko nâmkedâ
 beat them that to run way not they found,
nir tan nir tan lo hâſam ko dhirâo kiâ
 running running while old man they threatened him,
"Ra hâſam alem dalked lea amâ nael
 "Wait, old man, as you beat us your plough-ſhare
kote ſenoa? Hâſame ſenojana oſo nael re
 where will go? Old man went and plough in

kāñṭi e thokao pereveda oṛo piri re bagetada
 nail-he fix filled and high field-in left.
Nida dipli tuiuko naeltā ko hijūlena oṛo
 Night time jackals plough-near-they came and
nael bagrāo nagen enreko jhiki bārālena
 plough spoil for on it they dragged themselves
kāñṭi kotē chhochhrāo len imtāng parparadled koa.
 with nails snatched that time felt smart pain.
En dipli ko atkar keda chi nāelre
 At that time they felt that in the plough
kāñṭi thokao pereākānā oṛo ko kaji keda "ochoeā
 nails fix filled up and they said get away
ochoeā hārāme beda ked bua gan ka ko
 get away old man has cheated us wound may us
mente kāñṭi e thokan pereakada oṛo
 for the purpose of nails he fix filled up and
ko kaji keda, "Rā hārām alem ganakadleā
 they said, "Wait, old man, as you wounded us
āmā manal kotē senoa? Eṭā hulang soben
 your beans where will go?" Other day all
manal e god' chābākeda oṛo goṭa haturā
 beans-he plucked out and entire village-of
holad' ko ān ketē haka bara tadaē. Nida
 knife having brought hung about. Night
dipli tuiuko manal god' ko hijulena oṛo ko
 time jackals beans to pluck they came and they
god' hena do tikore goṭa ko gan
 plucked but in their hands completely they were
chaba jana. Parparanled ko uritang aṭkar keda
 injured Pained they that time understood
chi hārāme bedakedbua holadē haka kada
 that "old man had cheated us knives-he had suspended

abu gan ka bu mentē. Ochooa Ochooa
 we may be injured so that. Forbear, forbear,
alopea karedo tipē bandnioa Entedo
 do not, otherwise hands your will be cut off." Then
e kaji keda, Ra hārām alem ganakadleā. Amā
 he said, "Wait old man as then injured us. Thy
simko kote ko senoa? Hārām ne kaji
 fowls where they will go?" Old man this word
aiumkeda oṛo aiub' aiub' dipli soben sim ko bolo-
 heard and evening time all fowls having
janchi soben simko e atom ked koa oṛo nubajamdi
 entered all fowls he removed-them and after it
miad' datrom e sab' keda oṛo kaslire
 became dark a sickle he held and in roost-
e dubana. Nida dipli tuiuko hiju-lena oṛo
 place he sat. Night time jackals came and
moč' hōṛo sim kumburu ko kulkiā. Tara ko do
 one (jackal) fowls-to-steal they sent him. Some
bakirē ko ukujana. Inīē senojana oṛo
 in the garden-they concealed. He went and
hapā hapā te kueli e bolotana. Hārām ē
 silently roosting place they enter. Old man he
aṭkarāia oṛo datromz dondo beda. Nañren
 perceived him and sickle-he raised. Having
janchi gorsaen - e tombatāia. Tuiukz purāge
 got near with force he pecked him. Jackal very much
hāsu tāia. "Baba re baba! Badē badē mena
 was pained. "Oh heavens! big big (fowls) there
koa chind'. Soda tadingte maeomko soben urungo-
 are perhaps. Being pecked blood all are com-
tāna" mente Kaji-torsā geti ko ta
 ing out", saying. Whilst saying, comrades near he

nirjana. Kuṛi ko yam anakad'koa mente gāti
ran. "Where have you brought them", saying com-
koko kulikiya kaing hariad' ko yah baḍe
rades-they asked him. Not-I succeeded such big ones
mena kotē mid' soda regē ko harutertā inga.
there being one pecking with they drove me off."
Ente eṭānie senojana. Inī keo hāṛām e tomba
Then another went. Him also old man he pecked
kī ia. Inī oe nirjana. Enlo kagē paṛi paṛi
him He also ran away. Like this by turns
sobenko senojana oṛo sobenko e tomba gan ked koā
all went and all he pecked wounded them.
Tundurē hāṛām tuiu e senojan. Inī ge enkoa
In the end old jackal-he went. He their
bhandari e taekena. Āṣṭē Āṣṭē bolotana
head he was. Slowly slowly-he enters.
Hāṛām iniā saḍa - e aiuntada naurerikaia e
Old man his footfall he heard; he let him come
oṛo jorsaen e tombatā ia. Inī oe nirjana
near and with force he pecked him. He also ran away,
oṛo gāti koe kajiako tana, "Apea bhakuā ko
and comrade he says to them—"Your, O fools !
koun sim. Hāṛām do e dubakana datrom
where are [your] fowls? Old man-he is sitting, sick
sabkete sim simpe kajiea simdo soben e
having caught. Fowl fowls-you say.—Fowls all he
ukuakadkoa oṛo ae simē baiujana
has concealed them and he fowl (-as) is pretending
oṛo abu e ganjad bua. Ena ka pe ṭhor keda
and us-he is wounding us. This not you understood

bhakuako ! Ente sobenkoko nirjana. Etá hulung
 fools !” Then all fled away. Other day
buria setá re rá'tan sulitan e
 old woman in the morning crying weeping she
taekena. Tuiuko hiju namkiako oro ko
 had been. Jackals came and found her they, and they
kajiai tana “Ate aji chinamentem rá
 say to her, “Oh ! grand mother ! Why are you
tana chiná hobajana. “Chinaing kapiapea
 weeping ? what happened ?” “What-I shall tell you,
jaiing ko. Nido hārāme goejana. Ena okoē
 oh grand sons ! He the old man died. That who
oro topa aing ae oro okoe asuling ae ?
 will bury him for me and who will support me,
mente paham pahaming rá tana” “Oh ente
 this remunerating-I am weeping.” “Oh ! that
nagente alom phikira ale mena lea alele asul mea
 for do not worry; we are here; we will support
chiulam kamaná
 you when you are doing the last rites of the old man.
mod' piť taecomte e metad' koa Iril ná
 one week after.” He said to them. Eight days (after)
setá re buria lalade etekeda. Enló ge
 in morning old woman baking she began. Soon after
tuiuko hijú lena. Chhang chhangó chi
 jackals came there. Whenever the sound of *chhang*
enado aji aing ge
chang was made, “That is grand-mother for me,
enadó aji aing ge mente ko kaklajad
 that is O grand mother for me !” saying they were
taekena. Enkare ape dapal ape
 shouting. “Like this you all will fight one another,

eperang ape oꝛo pe gopoea ape
 abuse one another and you kill one another; you
sobenko judá juda ing tol pea oꝛo lad'
 all separately I will bind you and after
keteing hating tá pea mente e
 preparing bread will divide among you," saying she
kajiad' koa sobenko majur keda, oꝛo buria
 said to them; all agreed, and old woman
enlekae rika keda. Maranguter tuiuko dhenkirē
 like that she did. Biggest jackal the rice-
mofo no baerte e tol ki ia
 husking pestle rather thick rope with-he tied him
oꝛo hapuring khunṭā korē jhañk korā e
 and small ones in the pegs in the creeper-supports he
tol ked koa oꝛo hārām e kajiaia
 tied them and old man she called out to him,
 "Hārām, hārām" *hākē satab keda oꝛo tara*
 "Old man, Old man!" Axe quickly holding and from
genātē korāmē eṭe kedkoa Baer tata dariad'ko
 one side beating he began them. Rope-break-able-ones
do nirjana mendo ka dariad' ko e korām
 however ran away but not able ones-he beat-
goeked koa. Hārām-tuiu do ka e nirdaoijana
 kill them. Old jackal however not he could run away.
Inī do kis kis e koramgoe kia. —Tundu.
 Him out of anger he clubbed to death. —The end.

Translation.

Once upon a time there lived an old couple. They had no children. Both lived on cultivation.

The old man used to go to plough and his wife used to take his mid-day meals to him in the field. One day the jackals saw her carrying meals to her husband. The jackals held a council and decided,—“Come let us snatch away the food which she is carrying.” Then they ran up to the old woman and said, “O grand mother! O grand mother! What are you taking with you? Let us see what it is.” Saying this they snatched away the cooked rice and ate it up. The old woman went to her husband weeping and narrated to him everything that had happened. The old man was very much enraged and decided to beat the jackals. Next day he sent his wife in his [own] loin-cloth to the field and putting on his wife’s clothes went carrying the cooked rice on his head. In the way the jackals again accosted him, saying “O grand mother! O grand mother! What are you carrying? Let us see.” Saying this they surrounded the man but he had brought a stick concealed with him. When they came near he gave them a sound thrashing. The jackals while running away said to him, “Wait, old man. You beat us. Where will your plough go?” The old man went and fixed nails in the plough and left it in the field. At night the jackals came and began to drag themselves on the plough for spoiling it. But their bodies were scratched all over and then they understood that nails had been fixed in the plough. Then again the jackals said, “Well, old man, where will your beans go?” Next day he plucked all the beans and in their

place hanged knives which he had borrowed from the villagers. At night the jackals came to pluck the beans. They attempted to pluck the knives and their hands were all cut. Then they understood that the old man had again cheated them and had hung knives. While going away they held out again the threat to the old man, "Wait, old man, where will your fowls go?" The old man heard this and he removed the fowls from the fowl-house and sat there. At night the jackals came and one of them was at first sent to steal the fowls, and others hid themselves in the croft. It entered the fowl-house quietly. The old man knew this and got his sickle ready. When the jackal came near, he pecked the jackal with the sickle with force. The jackal felt smarting pain. "Oh heavens! there are very big ones! One pecking has brought out blood." Saying this it went to its comrades. "How many fowls have you brought?" asked his comrades. "I could not. There are very big ones. They drove me off pecking." Then another went. The old man also pecked at it. It also ran away. In this way all went and all were injured. In the end the old jackal who was their leader went. It entered the fowl-house quietly. But the old man heard the sound of its feet. When it came near, the old man pecked at it with the sickle. He also ran away and said to the other jackals, "You fools! Where are the fowls? The old man is sitting with the sickle. You said there were fowls. He has concealed the fowls and he is sitting in place of the fowls, and wounding

us. You fools! Did you not understand this?" Then all ran away. On another day in the morning the old woman was weeping. The jackals came near her and said to her, "Oh grandmother! Why are you weeping, what has happened?" The old woman replied, "Oh grandsons! What shall I say? The old man is dead. Who will bury him? Who will support me? These things make me weep." The jackals said, "Oh, do not worry for that. We are here. We will maintain you. But when is the *Kamana*¹ festival coming off?" She said, "After a week." After eight days in the morning, the old woman began preparing bread. At that time the jackals arrived there. Whenever there was sound of *chang chung*² the jackals all shouted, "Oh grandmother! [Give] that one to me, that one to me." Then the old woman said, "In this way you all will quarrel, fight and kill one another. Let me first tie each of you separately. Then I shall divide the bread among you." All agreed to this. The old woman then tied them up. The biggest jackal she tied to the *dhenki* (threshing pestle) with a thick rope and the small ones to creeper-supports. Then she cried out to her husband, "Come now, old man." The old man came out with a big axe and began belabouring the jackals one after another. Those who could snap the ropes ran away but those who could not were beaten to death by him. The old jackal could not run away. He was also beaten to death.——The end.

¹ *Kamana* is the festival held in burning the dead 8 days after death.

² *Chhang chung* is the sound produced when anything is put into boiling oil for frying.

MISCELLANEOUS CONTRIBUTIONS.

I. NOTE ON THE DHARUAS OR THE GONDS OF MAYURBHANJ STATE.

Messrs Russell and Hiralal in their *Tribes and Castes of the Central Provinces*, have given an account of the Gonds. In the following note I propose deal with a few points in which my account will differ a little from that account.

The Gonds or Dharuās of Mayurbhañj are distributed in the Mayurbhañj State as follows, according to the Census of 1931 :—

Sadar Sub Division	—	306
Kaptipada	„	188
Bāmanghati	„	2,458
Pañchpiṛ	„	10,854

From the above it will be seen that the subdivision of Pañchpiṛ contains the largest number. According to tradition, the Bāmanghāṭi subdivision was the home of the Gonds, from where they migrated to other places when the Zamindar of Bāmanghāṭi was deposed in 1835 by the then Mahārājā Jadunath Bhañjā of Mayurbhañj. The history of the Zamindar family narrates that their ancestor came to Mayurbhañj from Garh Mandala in the Central Provinces, and his family was known as the Dharma Zamindar of Bāmanghāṭi.

The significance of the Oṛiyā term Dharuā can be understood from the following quotation

from the *Tribes and Castes of the Central Provinces*, Vol III :—

1. "The ordinary Gonds in most Districts form one endogamous group, and are known as the Dhur or 'dust' Gonds, that is, the common people." (P. 63)
2. "The Dharwe or Naik Gonds of Chanda were formerly employed as soldiers, and hence obtained the name of Naik or leader." (P. 64)
3. "Here certain large septs, especially the Mika and Dhurwa, are divided into a number of sub-septs within each of which marriage is prohibited." (P. 67)
4. "The meaning of the important sept names Marābi, Dhurwa and Nika has not been ascertained, and the members of the sept do not know it." (P. 67)

It is not known whether the Dharuās of Mayurbhañj were so called from those three significances of the term or any of them, namely, (i) the ordinary Gond, (ii) Military service and (iii) Sept name.

The Gonds are found in Orissā in the States of Keonjhar, Bonai, Bāmṛā and Gāngpur. In Bonai "the two leading members of this tribe, called respectively *Daṇḍapāṭa* and *Mahāpātra* held fiefs on terms of military service under the chief. (*Orissa Feudatory States Gazetteer*, p. 145).¹ So it is possible that the name Dharuā

¹ In Keonjhar the Gond is an immigrant from the Central Provinces wearing Brahmanical thread but is considered a low caste; his touch defiles. A Gond caste-chief is called Mahapatra and bears the surname of Singh. (*Orissa Feudatory States Gazetteer* p. 224).

is due to the military service which they accepted under the rulers of Mayurbhañj and Bonai.

The Gonds of Mayurbhañj are divided into 1. Soma (the moon), 2 Surya (the sun) 3 Jadu, 4 Kadamba, 5 Gangā and 6 Garga *vams'as* which are well known Kshatriya stocks of India and it seems that this classification of the tribe has been based on the tradition of the Hindu Purāṇas. Messrs Russel and Hiralal are silent on this point.

In the Pāñchpiṛ subdivision of Mayurbhañj, all these six stocks are found as noted below :—

1. The Mahāpātra family of Sunamuhin, who trace descent from the Zamindar family of Bāmanghāṭi claim to belong to the *Soma* stock (*vams'a*).

2. The Gonds of village Jamuti belong to the *Surya* stock (*vams'a*).

3. The family of Rama Naik of Sunamuhin belongs to *Jadu* stock (*vams'a*).

4. The family of Tulsi Naik of Sunamuhin belongs to the *Kadamba* stock (*vams'a*).

5. The Mundhani family of Khuñṭapara belongs to the *Ganga* stock (*vams'a*).

6. The family of Sadhu Naik of Pārbatīpur belongs to the *Garga* stock (*vams'a*).

There is a head of each of these six families who is known as *Mundhani*.

Each of these six families is said to have a Rishi or priest representing the *Gotra* (clan) name of the family and again each priest is represented

with a popular animal which is the object of veneration of the family.

All these six families are also classified according to the number of *deos* or gods also, and this *deo* classification is due to the number of sons born to each of the seven sons of Paramesvara at the time of creation. One who had only one son is the progenitor of Eka-deo (one-god) family which has been extinct from the world. Similarly others who had two, three, four, five, six and seven sons were known respectively as *Dua-Deo* (two-god), *Tiri-Deo* (three-god), *Chari-Deo* (four-god), *Pañcha-Deo* (five-god), *Chha-Deo* (six-god), and *Sāta-Deo* (seven-god) families.

<i>Name of family</i>	<i>Names of Deos</i>	<i>Names of Rishi or priest</i>	<i>Name of animals, the objects of worship</i>
1. Ganga	Dui-Deo	Makara	Crocodile
2. Surya	Tiri-Deo	Vas'is'tha	Lion
3. Kadamba	Chāri-Deo	Subesa	Falcon
4. Jadu	Pañcha-Deo	Kāsyapa	Tortoise
5. Garga	Chh-Deo	Gārga	Elephant
6. Soma	Sāta-Deo	Nāgasa	Cobra

According to Messrs. Russell and Hiralal "in Chanda a classification according to the number of gods worshipped is found. There are four main groups worshipping seven, six, five and four gods respectively * * * Formerly there were three-two- and one-god worshippers, but in each of these classes it is said that there were only one or two septs, and they found that they were much inconvenienced by the paucity of their num-

bers, perhaps for purposes of communal worship and feasting; and hence they got themselves enrolled in the larger groups. In reality it would appear that the classification according to the number of gods worshipped is being forgotten, and the three lowest groups have disappeared. This conjecture is borne out by the fact that in Chhindwārā and other localities only two large classes remain who worship six and seven gods respectively and inter-marry with each other, the union of a man with a woman worshipping the same number of gods as himself being prohibited. Here, again, the small septs included in the groups appear to serve no purpose for regulating marriages. In Mandlā the division according to number of gods worshipped existed as in Chāndā; but many Gonds have forgotten all particulars as to the gods and say only that those septs which worship the same number of gods are *bhai-band* or related to each other, and therefore cannot inter marry. In Betul the division by number of gods appears to be wholly in abeyance." (*Tribes and Castes of C. P.*, Vol III, pp. 66-67.) Thus it appears that the Gonds of Mayurbhañj are more orthodox than their brethren in the Central Provinces which was their original home.

P. ACHARYA, B. Sc.

II. WOANGALA FESTIVAL OF THE GAROS.

The ceremony I am going to describe is the only annual socio-religious festival of the Garos specially among the Abengs. It is usually held in the last week of November or in the first week of December, that is, just after the gathering of the rice harvest. Generally the ceremony lasts for two nights and three days but in some big villages it is sometimes continued for seven nights and days. The first day of the ceremony is known as 'Rugala', the second day as 'Sasatson' and the third day as 'Guridoka'. The ceremony consists of two parts,—religious and social.

The religious functions of the festival are first completed. It consists in the worship of the various deities and the spirits having special relation respectively with the individual and the village. Then the social side of the festival begins, which consists of feasts, music and dancing.

On the first day the whole village people are busy in collecting and preparing for the coming worship in the evening. At the outset the worship of the various deities and spirits are made in the house of the 'Nokma' (secular headman of the village) and then in the house of the priest and after that in the house of other villagers.

'*Rongdik mite*'.—This is a female spirit and the worship is made in the presence of women. The spirit resides in the pot in which rice kept and the conception of this deity is similar to that of the Hindu goddess 'Lakshmi'. In the evening

the 'Kamal' (priest) comes and a cotton-thread is tied round the neck of the rice-pot with three lumps of cotton hanging round it. After that the priest invokes the spirit with incantations within the room, and sacrifices three hens with a *dao* in front of the pot. The blood is sprinkled all over the pot and on the cotton lumps, and the feathers are tied to the pot.

This is the goddess of wealth among the Garos and is particular revered by the ladies. Women also have got a special claim to worship Her. Here a similarity occurs with the practice of the Hindus whose guardian of wealth is the goddess 'Lakshmi' regarded as the special goddess of the ladies.

Nokni mite or *Phakmana dothata*.—(*Nokni mite* means the spirit of the house (*Nok*=house, *mite*=spirit) and *phakmana dothata* means the front wall of the house where the sacrifice is made. After finishing the worship of the '*Rongdek mite*' the priest comes before the front wall of the house. Here he first worships the spirit of the house and then sacrifices one red cock. The blood, the down and the feathers are scattered all over the wall.

Next in importance is the '*Khrongna dothata*' (the sacrifice to the sacred post). Near the seat of the spirit of the house is the sacred post. Here the priest after the worship of the house-spirit sacrifices a hen and the post is covered with blood and feathers of the hen.

Next comes '*Krum dothata*' (the sacrifice to the small drum). The priest is then taken to the

place, where the drum is hanging within the room, and here he sacrifices a cock or hen and smears the blood and sticks the feathers on it.

Then '*Akom, Miwee lothata*,' that is, the sacrifice to the gong and the bell, is made. The gong and the bell are kept at the foot of the '*Manjuri*' post of the house. Here the priest first worships all the iron implements of the house and the gong and the bell. After that he sacrifices a cock or a hen with the blood and feathers to which '*Manjuri*', *Akom* and *Miwee* are married.

Then comes '*Nagra dothata*,' that is, the sacrifice to the flat drum. A hen is sacrificed in front of it and the blood and the feathers are put on to it.

Angkha dothata (the sacrifice of the crab) — The front verandah of the house to which the stairs lead, is known as '*andipni*'. Here they keep ginger plants, taro plants and many other wild plants and at the foot of the post of the verandah all old implements of agriculture such as '*kachi*' (scythe), '*gach-chi*' (spade), '*ruwa*' (axe), '*ate* (dao), are laid out. They also put cooked rice and a soup with a kind fish known as '*chang*' near the post. In case the '*chang*' fish is not available they offer some other fish in its stead. The priest after finishing the above-mentioned rites comes to the place after muttering some queer incantations, and sacrifices two crabs and leaves ten or twelve crabs within the house.

When the worship of these spirits is finished in the house of the headman, then the drum, '*rang*' (gong), and other musical instruments are

played and 'chu' (rice-beer) is poured on all the places where the worship has been made. The 'Nokma' (headman) then brings a pot of 'chu' which is made for the occasion and first offers a glassful of it to the priest. And after the priest has drunk all persons of the village are allowed to drink and the entire quantity of drink required is supplied by the headman. The women and children are not debarred from joining on this festival and they also take 'chu' after the male members of the village have drunk.

When the drinking is over the priest first dances with a 'sphe' (shield) in his left hand and 'milam' (sword) in his right. He wears the 'gando' (a square blue apron six inches in breadth hanging from the waist to cover the privates), the 'khoka' (the ceremonial red turban of the Garos), 'jaksil' (a ring of bell metal) at elbow and 'jakchal' (a ring of bell metal) at the wrist. Dressing himself in this fashion he first dances round the fire-place inside the house of the headman and after him the headman dresses himself in the same fashion and dances after him. After this all villagers are allowed to dance till a late hour at night.

After the dance a ceremony which is known as 'wanchi' is performed. It begins with the paddy being pounded, and a quantity of water being mixed with it. This white liquid is then distributed to all present in the house of the headman. When this is over, the women dress themselves in their best attire and dance for the first time in the house of the 'nokma.'

After this the priest takes all persons of the village to his house to worship the three spirits, viz., 'Rongdik dothata', 'Phakmana dothata,' and 'Khrong dothata'. These three spirits are worshipped and three hens are sacrificed to them in the same manner as described above and after it the dancing follows. The 'wanchi' ceremony is then performed and after that the women dance there.

After finishing the worship in his house the priest with all the men of the village goes to each house of the village and at each house the priest performs 'Rongdik dothata' and sacrifices a hen. The 'wanchi' ceremony and the dancing follow in the same manner as already described. Sometimes the worship of 'Rongdik dothata' is not finished in one night in all the houses of the village; in such a case on the next night it is continued in the remaining houses. The worship cannot be performed at daytime.

At dawn all villagers again assemble in the house of the headman and a feast is arranged by him with pig, hen and *chu*, and the villagers are fed sumptuously by the headman. After the feast the 'Sasatsoa' is performed. First, the priest takes a piece of 'sasat' (incense) and goes near the 'manjuri' post where 'akhom' and 'miwe' are placed and burns the incense (*sasat*) with queer incantations. The idea of worshipping the 'sasat' is that according to Garo cosmology God first made the 'sasat' tree and after it all other trees were made; so they annually worship this tree and in each worship 'sasat' forms an important ingredient. After the worship of 'sasat', it is

burnt in all other places where ceremonial rites have been performed earlier.

After the worship of 'sasat' the people assemble on the courtyard to dance, but before this dance they are not allowed to dance outside. Here the people dance for sometime and then they go to the house of the priest who offers to all persons plenty of drink and after that they march from house to house with music and dancing. If the performance of 'Rongdik dothata' was not finished in all houses on the previous night then at nightfall the priest with the villagers visits the remaining houses and finishes the worship and sacrifice. When the worship in all houses is over then all men of the village assemble in the courtyard of the headman and spend nights and days with songs and dances with unceasing supply of drink by the village headman.

J. K. BOSE, M. A., P. R. S.

(*Asst. Lecturer, Calcutta University.*)

III. ORDEALS AMONG THE GAROS.

Chokhela.—Ordeals still play an important part in Goro society though many of them have lost their former importance. When a dispute arises regarding the ownership of property or land and no settlement is possible by the intervention of other parties then they have recourse to the 'Chokhela' ordeal. In this ordeal an earthen pot is bought by the claimant, even at a high price. Then the village officers with the disputants go to a neighbouring jungle. Here three bamboo posts, each three feet in height, are planted on the ground in such a fashion as to form a triangle and on the tripod formed by these posts is placed a pot full of water. Then a log of wood of nearly three cubits' length is placed under the pot and set fire to. If the water boils by the fire of the wood then the claimant loses; but if on the other hand it does not boil then the possessor wins and the whole dispute is settled without any further quarrel.

Akhrom.—The spot where a man is killed by a tiger is known as 'akhrom' and the Garos are afraid to go near that spot even after some years of the occurrence. To find out whether a man is actually guilty of a social offence, the village elders take recourse to the 'Akhrom' ordeal. A goat or a hen is tied at such an 'akhrom' for one night by the man who is suspected and if the animal is not injured or killed then the man is taken as innocent. Sometimes the village elders order the man (in the case of a grievous offence) to lie down at that

place for one night and in the morning if the man is found alive without any injury on his person then his innocence is proved.

III.—When a man has committed any heinous crime then he is taken before the headman who orders the accused to utter the following oath before a number of old men of the village who act as judges :—

Saljong dokhina matcha chikhina mongmg.
 [May the] sun kill tiger bite elephant
dochina ju mat china jak mat china aganana
 kill legs be cut off the hands be cut off I am
salganong anga mamungba
 speaking in the presence of the sun I least
dosh gri oay.
 offence not.

“May the sun kill me, the tiger bite me, the elephant kill me. I am speaking in the presence of the sun and if I have done the least offence may my hands and legs be cut off.”

After the utterance of this oath, the judges give a time-limit to see its result. It varies according to the gravity of the situation. There are three kinds of time-limit—viz., seven days, a term of fifteen days, and one year. If after the utterance of this oath and within the period prescribed by the judges anything untoward happens to the man then the man is taken as guilty.

IV.—Lastly, I reproduce below the oath which is taken by the Garos in the Court of the Deputy Commissioner of the Garo Hills. This oath is

not the usual oath of the court employed in other parts of Assam but it is a modification of the Garo ordeal ; and for fear of this oath many Garos are still afraid to tell a lie in the court. The oath is as follows :—

Be be agangen, matcha chikgen, mongma be
“Truth I will speak, tiger will bite, elephant also
dokgen bhue agangawa.
beat, false I will not speak.”

“I will tell the truth [or else] the tiger will bite me and the elephant also will kill me. I will not tell a lie.”

J. K. BOSE, M. A., P. R. S.

(*Asst. Lecturer, Calcutta University.*)

ANTHROPOLOGICAL NOTES AND NEWS.

Second Session of the International Congress of Anthropological and Ethnological Science.

The Second International Congress of Anthropological and Ethnographical Sciences was held at Copenhagen (Denmark) from July 31 to August 6. The Congress was formally opened in the Grand Hall of the Copenhagen University on August 1, His Excellency the King of Denmark being present. There were about 700 delegates and members present from different nationalities. Among the Eastern countries Egypt, Iran, India, Indonesia (Java), China and Japan were represented by Dr. Suniti Kumar Chatterjee from the University of Calcutta, Mr. R. P. Masani from the University of Bombay and Major P. Bardhan from Calcutta.

The Congress elected Rai Bahadur Sarat Chandra Roy of Ranchi as a member of the Council of Honour.

There was a large and varied programme including reading of papers, discussions, lectures and ethnographic films on different aspects of the science in the several sections of the Congress. Representatives also participated in excursions to places of historical interest and visits to museums including the world famous collections of Anthropology, Ethnology, History and Art in and outside Copenhagen.

INDIAN ETHNOLOGY IN CURRENT PERIODICAL LITERATURE.

In *Man* for July, 1938, Mr. Minendra Nath Basu in a communication gives a table of average blood-pressure (both systolic and diastolic) of 200 Naluas of Bengal, which shows that their average systolic pressure is 96·6 mm. Hg., and dyastolic pressure is 58·3.

In *Folk-lore* for June, 1938, Prof. Aurelio M. Espinosa adduces further arguments and evidence in favour of the Buddhist *Jataka* (no. 55) origin of the Tar-baby story which he had advanced in 1930 (*Folklore*, XL, 217-227), and refutes the arguments of Dr. W. Norman Brown in favour of the African origin of the tale. Prof. Espinosa traces the history of migration of the tale from its original home in India to China, Africa, and Europe, and from Europe to all parts of Hispania-America, to the North American Indians, to the Philippines, to the Cape Verde Island, to Dutch Guiana, and to Mauritius.

In the *Journal of the Royal Asiatic Society of Bengal*, Vol. III., 1937, no. 1 (Letters), Dr. E. W. E. Macfarlane gives a few measurements of White Jews of Cochin and the distribution, percentages and frequencies of blood-groups in Jewish and neighbouring communities and of miscellaneous low castes in Cochin, and discusses 'The Racial Affinities of the Jews of Cochin.' She comes to the following conclusions :—

"The White Jews have preserved a Near Eastern and European Semitic strain and show no indications of admixture with Malayalis. They are descended in the male line from Jewish immigrants from Arabia, North Africa and Europe who have arrived during the past 150 years. The fact that they have a few customs peculiar to themselves and to the Black Jews, some of which show local Hindu influence, demonstrates a cultural continuity with an ancient Indian Jewish community. They have probably descended from inhabitants of the old Jewish principality at Shingli (Cranganore) of a millenium ago, through female lines. All the descendants of these early Jewish settlers in the male line have died out or moved away.

The Black Jews are the descendants of mixed Semetic and native Malayali ancestors. In the past, converted and manumitted Indian slaves have been absorbed into this community. Their origin was no doubt in true Semites who came to Cranganore long ago. According to Rabbinical ralling they are true Jews if they follow all the Judaical ritual. Judaism is a culture and Jews come from many races.

It is quite possible that there exist, in Kerala, people of similar racial admixtures among Anglo-Indians, Black Jews, Hindus (matriarchal low castes), and Muslims."

In the same number of the Journal, Mr. Sasanka Sekher Sarkar describes certain "Social Institutions of the Mal-Pahārias" of the Santāl Parganās.

In the *Quarterly Journal of the Mythic Society* for April, 1938, Dr. C. Minakshi contributes an article on "Elephant Lore in Pallava History" and Mr. L. V. Ramaswami Ayer on "Dravidic Sandhi;" and Mr. S. C. Mitra continues his "Studies in Bird-Myths" and "Studies in Plant-Myths." In the July (1938) number of the same Journal, Mr. S. Moses writes on "Water-divining," Mr. L. A. K. Iyer on "The Signi-

ficance of Megalithic Monuments," and Mr. S. C. Mitra "On an Ancient Indian Charm for exorcising noxious animals from paddy-fields."

In the *Journal of the Benares Hindu University*, vol II, no. 2 (1938) Rai Bahadur Sarat Chandra Roy contributes an article on "The Study of Anthropology from the Indian View-point," and Dr. R. K. Mookerji on "The Meaning of Veda and the Significance of Vedic Yajñas," and Prof. Dr. Raj Bali Pandey on "The Purpose of the Hindu Samskāras".

In the *Journal of the B & O Research Society* for March-June, 1938, Prof. C. S. Srinivasachari contributes an article on "Pre-Dravidian, Proto-Dravidian and Dravidian," and Mr. S. C. Mitra "On the Cult of Bir-Kuar".

In the *Journal of Indian History*, Miss P. C. Dharma, contributes an article on "Women during the Rāmāyaṇa Period".

In the *New Indian Antiquary* for May, 1938, Mr. M. K. Emeneau contribute an article on "Echo-words in Toda".

In the *New Review* for April, 1938, Father H. Heras concludes his article on "The Aryans in their Homeland".

In the *Modern Review* for April, 1938, Mr. Asoke Chatterjee writes on "Art in Primitive and ancient Life." In the May (1938) number of the same journal Dr. D. N. Majumdar writes on "Tribal Population and Christianity." In the June number of the same magazine Dr. Radha

Kamal Mukerjee makes a "Sociological Analysis and Forecast of Population Increase." In the July number of the same magazine Mr. D. Satyarthi contributes a paper on "Halbi Folk-songs." In the August number of the same magazine Prof. Bool Chand writes on the problem of "Society and the Individual To-day"—and pleads for "engineering in the realm of the emotions, for the displacement of drift by definite direction and for the assertion of the superiority of intelligence over instincts," and Mr. M. N. Roy gives an account of "The Structure of Chinese Society."

The second number (July, 1938) of *the Indian World*, a new Bombay Monthly, contains, among other articles, one on "University Reform" with special reference to India, by the Rt. Hon'ble Srinivas Sastri; one on "Modern Youth and Indiscipline" by Sir Sivaswamy Iyer, besides "Some Reminiscences in Journalism" by Sir Stanley Reed, "A Plea for Dominion Status" by Mr. F. E. James, "The Teacher and the New Age" by Mr. S. V. Mukerjea, "How I built up my Industry" by Raj Mitra B.D. Amin, "What is Planned Economy" by Mr. W. S. Irvine, "Malaria Control in India" by Dr. P. F. Russell, "Indian Navy" by Mr. G. L. Mehta, "My Experiences of Europe" by Madame Menaka and "Whither Woman" by Miss Modern.

The August (1938) number of the same Journal contains, among other useful articles, one by Dr. J. H. Cousins on "What is Art?" Dr. Cousins' definition of Art is,— "Art is the imposition of an inner order on an outer disorder." Reference is made in this article to some Indian art designs, and the author

sums up his paper as follows :—" Rhythm and design are the fundamentals of art, its life and its form. Superimposed on these are a number of adjectival qualities such as those of sound, texture, colour, sequence. These in their juxtapositions and proportions give extension and variety to the experience of beauty," Miss Modern continues her interesting article " Whither Woman ! " and refers to the changes that the position of woman has undergone from prehistoric times and the time of the ancient Greeks and the Romans down to the advent of Christianity.

The Annual Report for the year 1938, just issued by the *British Association for the Advancement of Science*, contains the Presidential Addresses delivered in its annual meeting held in Cambridge, from August 17 to 24, 1938. The Presidential Address of the Rt. Hon. Lord Rayleigh, General President of the Association, was (Part I) on *Vision in Nature and Vision Aided by Science*, and (Part II) *Science and Warfare*. Besides this General Presidential addresses, other addresses of special interest to the student of man are those on *Development and Evolution* by Prof. H. H. Swinnerton, President of the Geology Section ; on *Correlations and Culture* by Prof. Griffith Taylor, President of the Geography section ; on the *Scope and Method of Economics* by R. F. Harrod President of the Section of Economic Science and Statistics ; and on *Orient and Europe* by Prof. V. G. Childe, President of the Anthropology Section. We shall in our next issue refer to this Report in detail.

NOTICES OF BOOKS.

Ethnology.

The Malers of the Rajmahal Hills. By Sasanka Sekher Sarkar. (The Book Company, Calcutta, 1938) Pp. 129 + 4 Appendices. Rs. 4 or 6 s.

This is a welcome contribution to the slender stock of comprehensive monographs relating to the aboriginal tribes of India. Tribal Customs and habits are fast changing under the impact of new contacts and alien influences. As the Editor of this Journal writes in the Foreword to the book, "Since Bainbridge wrote the first comprehensive account of the tribe (Mālèrs) thirty years ago there have been, as our author's investigations reveal, important changes in tribal custom. Some old customs and institutions have decayed or disappeared, and new customs have sprung up or have been adopted from their neighbours. Fresh movements of the Mālèr population have also taken place. The Mālèr dormitories for bachelors as well as those for spinisters, are now decaying institutions. The ancient custom of interment has in some areas given place, obviously under Hindu influence, to cremation." The author's account of the people and language (Ch. I), appearance, dress etc. (Ch. II), domestic life, (Ch. III), social organization and kinship system, (ch. IV), ceremonial (Ch. V), and religious and magical practices (ch. VI), though not exhaustive, is, so far as it goes, carefully written; the

illustrations are well chosen, and the appendices are useful. The interesting communication that our author received regarding the custom of feeding a snake with plantain and milk and carrying it from village to village with dancing (App. IV) requires further investigation. We look forward to a future and enlarged edition of the book in the near future.

With regard to the author's disagreement with earlier writers who have suggested a historical and ethnic connection of the Mālèrs of the Santal Parganās with the Orāoñs of Chōṭā Nāgpur, the reasons adduced by him are neither convincing nor always correct. Thus the author is not correct in thinking that, unlike the Mālèrs, "Oraons do not believe in an after-life" (p. 8), nor is he correct in attributing this statement to the author of *Orāoñ Religion and Customs*, pp. 13 and 17. The statement at p. 13 of that book is not that the Orāoñs lack the belief in an after-life but that after-life to the Orāoñ is not a purgatory where by sufferings the deceased must expiate for sins committed during life on earth, but that it is an abode of bliss and freedom from all earthly troubles and worries, and that "it is in this life, and not in an after-life, that a man is visited with punishment for his misdeeds." At pp. 36-42 of that book the Orāoñ's conception of an after-life is described and the common Orāoñ saying "*khekel kia pachbālār, merkhānu Dharmē,*" "the ancestor-spirits dwell underneath the ground and the Supreme Spirit in the sky" is quoted; and it is

further pointed out that Orāoñ parents inculcate in their children the belief that for their departed relations "there are villages just like their own in the nether regions below their feet but that only the houses there are more substantial than those here on earth and that there are no Zemindars (alien landlords) there but the *bākris* (manorial houses) and *garhs* (forts or palaces) are occupied by their own dead relatives" (Roy's *Orāoñ Religion and Customs*, p, 36). In pp. 38-39 of the same book Roy has noted, as a result of personal enquiries, that the Mālèrs, too, believe (or did believe when he visited them a few years ago) that the souls of the dead live underground and sometimes reappear above the earth in the shape of a Pōri or willo-the-wisp. It is true that the Mālèrs do not now possess any tradition of their ancient connection with the Orāoñ. But so too they have no tradition of their ancient habitat in Draviḍian land or among Draviḍian-speaking peoples, although their Draviḍian speech, though now surrounded on all sides by tribes and castes speaking non-Draviḍian languages, would point to their ancient association with Draviḍian-speaking communities and probable former residence in the Draviḍian country. Comparative philologists refer to very close affinities of both Orāoñ and Mālèr speech with the Canarese language. It is not an uncommon phenomenon among primitive peoples that traditions of past migrations are lost, particularly under adverse historical and other circumstances. The fact that the Mālèrs now mostly live in hill recesses and hill-slopes do not

imply that they have always occupied the hills. Rather the probabilities are that they have been pushed up to the hills by the more virile Santals who came later and possessed a comparatively higher culture. Nor is the loss of the totemic clan system by a primitive people altogether unknown. Thus the Juangs, a primitive Mūṇḍā tribe, living mostly in the Keoñhar State and partly in the Pal Lahera State of Orissā, possessed at least 24 totemic clans or septs when Risley's *Tribes and Castes of Bengal* was published in 1891. Recently in the course of his investigations among the Juangs in the Keoñhar State the Editor of this Journal found they have no recollection or knowledge of any totemistic clan name, although in the State of Pal Lahera totemic clan-names are still more or less recognized by the Juangs there. Another Mūṇḍā tribe, the Hill Bhūiyās of Orissā, have practically lost their totemic clan organization, though here and there totemic clan names still survive but without the exogamous and other customs formerly associated with them. Other instances might be cited.

Thus it is no wonder that, living in secluded hill-recesses for over a century, the Mālèrs should have lost the totemic clan system. The fact that Oraoñ culture is now more complex than Mālèr culture is also not inconsistent with the two tribes having in the distant past formed one people. Difference in subsequent history, environment, and contacts can reasonably account for much of this present differences.

Our author says :—

"The greatest difference is found in the death ceremonies of the peoples. While it is strictly forbidden among the Mālèr women to

enter the cemetery, the dead body among the Oraons is carried by the womenfolk. The Malers dispose of the dead body either by burial or by cremation, whereas among the Oraons, although it is limited to a certain part of the year only, two successive processes are met with—the interment being followed by cremation. This difference in burial is remarkably followed by the beliefs in the after-life of the two peoples. The Malers believe that one continues to live in the same state as he is living in this world and gives all the belongings of the dead man along with him on his grave, whereas the Oraons do not believe in an after-life. To the latter everything is complete in this life.”

As regards the Orāoñ's supposed absence of any belief in an after-life, we have already referred to the author's misapprehension on the point. It is true that among the Orāoñs, women carry the bier of a corpse to the cremation-ground. This would appear to be a result of culture contact. Among the Mūṇḍā-speaking Hōs, too, the corpse is carried to the cremation ground by women, and in the Hō country an instance has been cited where the first handful of earth was put on the grave by the wife of the deceased. (Majumdar's *A Tribe in Transition*, p. 165). Among the Mūṇḍās, after the corpse is burnt, female relatives of the deceased pour water over the embers, and collect the bones for burying in the family grave-yard. The Orāoñs appear to have been influenced by the custom of their neighbours but, in partial deference to their own older tribal custom, as soon as fire is set to the pyre, Orāoñ women must beat a hasty retreat from the cremation-ground, without looking back. The author's attempts to explain away certain similarities between the Orāoñ and Mālèr cultures are also not convincing, but consideration of space forbid our discussing them.

Theories apart, the ethnographical facts collected and set forth in this little book are of great interest and value.

Religion and Medicine of the Ga People. By M. J. Field (Oxford University Press, 1937), Pp. x+214. 17 s. 6 d *net*.

This study was originally prepared as a thesis which was approved for the Ph. D. degree of the University of London. The book, as it now appears, consists of three parts. Part I deals with public worship and its variations in different parts of the country of the Gã people in the Gold Coast of Africa. The Gã people are neither townspeople nor country people. They have seven sea-side towns and a number of villages, and every village is an agricultural colony from one or other of the seven towns, and "none of the villagers, though they spend most of their lives in their villages, regard themselves as purely village people." Every year, at the time of thier religious festivals "they retun to their home town and are reunited to their fathers' houses and fellow-townsmen. The town people, again, are not true town people, for no family is without agricultural or fishing interests in one or other of the villages." The unity and solitarity of the various peoples is remarkable. Our author thinks that "mutual protection is probably not the whole secret; much of it lies in the polytheistic nature of Gã religion

and the habit of toleration and consideration for other people's gods. Gā governments were originally absolute theocracies, the priests having been the only rulers. And to this day the 'town-fathers' and 'town-guardians' receive their authority directly from the chief priest and only by virtue of their primary positions as lesser priests. "A chief is still first a priest; if he disqualifies himself to be a priest he has no longer the right to be chief. In towns where the chiefly office has, by the misunderstanding of Europeans, become divorced from the parallel priestly office, endless trouble has accrued, and chiefs have become the pawns of a new and predatory class playing an unsavoury political game. But in those towns which have preserved something approaching the original type of government, respect for authority is maintained."

'Fetishism', common in West Africa, is foreign to Gā worship. The first part of the book contains an account of the gods in the different towns, their characteristics, methods of worship (according to the types of music and dancing employed) and their servants or ministers. Part II deals with the Gā principles and practice of medicine and magic. According to Gā dogma a human being is composed of three entities, the physical body, *susana* or soul or personality and the *kla* corresponding closely to what might be called the subtle body. The *kla* is that part of the individual which is passed on in reincarnation. When a man dies he gives

up his *kla* and becomes a *sisā* or invisible ghost. The dead can be born again only in their own families. Rebirth does not affect the *sisā*, so that the *sisā* population of the universe goes on swelling, but the amount of *kla* is unalterable. The *kla* carries with it the fate, luck, or life-programme of the man. This is something external to its owner and not a part of his own make-up like the *kla* and *susana*. Some persons' luck or fate is so evil that it has to be exorcised with the help of the medicine-man. Another invisible influence on the fate of the individual is that of his "sky-family" to which the person belonged in the sky-world before he or she was born on earth, and which is nearer and dearer than any earthly relatives. Such is the philosophy of life which gives this simple people strength to bear up with the ills of this life and to look forward with hope to return to a more peaceful and happy after-life which they regard as their real home. Part III deals with the ceremonies of every-day life.

The book is not concerned with theories of diffusion or of functionalism. The author's main concern is get at the central reality of a custom, which, as our author says, "whatever its origin and however intricately conditioned by a set of functional implications, must always be a mental one and its mainspring must be sought in somebody's thoughts and feelings." The supremely interesting point about African institutions which the author seeks to understand, however imperfectly,

is "How do these institutions look to Africans?" And the glimmer of illumination which has come to the author (more than such glimmers of insight an outsider can hardly expect to be rewarded with) he has carefully recorded for the benefit and enlightenment of his readers. We heartily recommend the book to the attention of students of anthropology.

Race : A Study in Modern Superstition. By Jacques Baczunr. (Methuen, 1938). Pp. x + 353. 10s. 6d. *net*.

In this book the author is concerned not with a discussion of the generally recognized races of the world but with the various theories of race-origins from the earliest times to the present day. He finds that none of these divergent theories has a solid basis of facts to stand upon, and that "all racial groupings according to fixed factors, such as skull or pigmentation" have failed to bring order out of chaos. The author contends that race theories are forms of erroneous thinking, most of them being in effect disguises for hatred, aggressiveness, snobbery or mental laziness, and charged with ulterior motives, as, for instance, German race-theories have generally a practical political purpose. There is much truth in the author's criticisms of most race-theories and it cannot be denied that a good deal of erroneous race-thinking exists or is insisted

upon for ulterior motives, yet the existence of certain real race-differences can by no means be ignored, although it is equally true that no pure race exists in the world, and all mankind is "a mixed lot." As Dr. Marett says, "Race still baffles us mostly completely. Yet, breed is there; and, in its own time and in its own way, breed will out." Thus, Race, in so far as it connotes 'inherited breed', does count for something,—represents 'the stiffening in the evolutionary process,'—although we must agree with our author that to attribute the diversities of human conduct and character to inherent racial differences is an error and a superstition.

Sex in Relation to Society. By Havelock Ellis, (Heinemann, 1937) Pp. xv + 329. 12s. 6d. *net*.

This is an abridged and revised edition of the last volume of the author's well-known "Studies in the Psychology of Sex" which was published in America thirty years ago. The earlier edition was intended mainly for medical students. As Dr. Havelock Ellis writes in the Preface to the book under review, "Social and legal opinion has during recent years so far changed that what previously it was only possible to bring before the professional reader may now be presented to all serious readers." And no doubt the book, with its rich store of valuable scientific information and illustrative facts and illustrations, will prove intensely interesting and instructive to the student of sociology as well as to the lay reader.

The book is divided into twelve chapters as follows:— I. The Mother and Her Child; II. Sexual Education; III. Sexual Education and Nakedness; IV. The Valuation of Sexual Love; V. The Function of Chastity; VI. The Problem of Sexual Abstinence; VII. Prostitution; VIII. The Conquest of Venereal Diseases; IX. Sexual Morality; X. Marriage; XI. The Art of Love; and XII. The Science of Procreation. Every chapter is replete with valuable facts and important conclusions, which it is not possible to summarise in a short review. By way of samples, we shall refer to certain passages from the book,—though we may not subscribe fully to all his views. Lamenting the lack of sexual education in the modern civilized world, and referring to various initiations in social life at puberty found in the lower culture throughout the world and also in conservative villages of southern India (Palghat Brahmans), Dr. Havelock Ellis writes,—

“We have lost these ancient and invaluable rites of initiation into manhood and womanhood, with their inestimable benefits; at the most we have merely preserved the shell of initiation in which the core has decayed. In time, we cannot doubt, they will be revived in new forms. At present the initiation of youths and maidens is left to the chances of some happy accident, and usually it is of a purely cerebral character which cannot be perfectly wholesome, and is at best absurdly incomplete.” (p. 72)

With reference to the education of public opinion regarding nakedness our author writes:—

“From the point of view with which we are here essentially concerned there are three ways in which the cultivation of nakedness—so far as it is permitted by the slow education

of public opinion—tends to exert an influence: (1) It is an important element in the sexual hygiene of the young, introducing a wholesome knowledge and incuriosity into a sphere once given up to prudery and pruriency. (2) The effect of nakedness is beneficial on those of more mature age, also, in so far as it tends to cultivate the sense of beauty and to furnish the tonic and consoling influences of natural vigour and grace. (3) The custom of nakedness, in its inception at all events, has a dynamic psychological influence also on morals, an influence exerted in the substitution of a strenuous and positive morality for a merely negative and timid morality such as formerly ruled in this sphere.

“Perhaps there are not many adults who realized the intense and secret absorption of thought in the minds of many boys and some girls concerning the problem of the physical conformation of the other sex, and the time, patience, and intellectual energy which they are willing to expend on the solution of this problem. This is mostly effected in secret, but not seldom the secret impulse manifests itself with a sudden violence which in the blind eyes of the law is reckoned as crime. A German lawyer, Dr. Werthaur, has stated that if there were a due degree of familiarity with the natural organs and functions of the opposite sex, 90 per cent. of the indecent acts of youths with girl children would disappear, for in most cases these are not assaults but merely the innocent, though uncontrollable, outcome of a repressed natural curiosity. It is quite true that not a few children boldly enlist each other's co-operation in the settlement of the question and resolve it to their mutual satisfaction. But even this is not altogether satisfactory, for the end is not attained openly and wholesomely, with a due subordination of the specifically sexual, but with a consciousness of wrongdoing and an exclusive attentiveness to the merely physical facts which tend directly to develop sexual excitement. When familiarity with the naked body of the other sex is gained openly and with no consciousness of indecorum, in the course of work and of play, in exercise or gymnastics, in running or in bathing, sometimes with parents equally

naked, from a child's earliest years, no unwholesome results accompany the knowledge of the essential facts of physical conformation thus naturally acquired. The prurience and prudery which have poisoned sexual life in the past are alike rendered impossible.

"Nakedness has, however, a hygienic value, as well as a spiritual significance, far beyond its influences in allaying the natural inquisitiveness of the young or acting as a preventive of morbid emotion. It is an inspiration to adults who have long outgrown any youthful curiosities. The vision of the essential and eternal human form, the nearest thing to us in all the world, with its vigour and its beauty and its grace, is one of the prime tonics of life." (pp. 93-94).

With regard to asceticism and chastity, our author says,—

"It will be seen that asceticism by no means necessarily involves perpetual continence. Properly understood, asceticism is a discipline, a training, which has reference to an end not itself. If it is compulsorily perpetual, whether it dictates of a religious dogma, or as a mere fetish, it is no longer on a natural basis, and it is no longer moral, for the restraint of a man who has spent his whole life in a prison is of no value for life. If it is to be natural and to be moral, asceticism must have an end outside itself, it must subserve the ends of vital activity, which cannot be subserved by a person who is engaged in a perpetual struggle with his own natural instincts. A man may, indeed, as a matter of taste or preference, live his whole life in sexual abstinence, freely and easily, but in that case he is not an ascetic, and his abstinence is neither a subject for applause nor for criticism.

In the same way chastity, far from involving sexual abstinence, only has its value when it is brought within the erotic sphere. A purity that is ignorance, when the age of childish innocence is once passed, is mere stupidity; it is nearer to vice than to virtue. Nor is purity consonant with effort and struggle; in that respect it differs from asceticism. 'We conquer the bondage of sex,' Rosa Mayreder says,

'by acceptance, not by denials, and men can only do this with the help of women.' The would-be chastity of cold circulation is equally unbeautiful and unreal, and without any sort of value. 'Chastity is a thing of the soul,' said Hinton. A true and worthy chastity can only be supported by an ardent ideal, whether, as among the early Christians, this is the erotic ideal of a new romance, or, as among ourselves, a more humanly erotic ideal. 'Only erotic idealism,' says Ellen Key, 'can arouse enthusiasm for chastity.' Chastity in a healthily developed person can thus be beautifully exercised only in the actual erotic life; in part it is the natural instinct of dignity and temperance; in part it is the art of touching the things of sex with hands that remember their aptness for all the fine ends of life. Upon the doorway of entrance to the inmost sanctuary of love there is thus the same inscription as on the doorway to the Epidaurian Sanctuary of Æsculapius: 'None but the pure shall enter here.'

"It will be seen that the definition of chastity remains somewhat lacking in precision. That is inevitable. We cannot grasp purity tightly, for, like snow, it will merely melt in our hands. 'Purity itself forbids too minute a system of rules for the observance of purity,' well said Sidgwick in his *Methods of Ethics* (pp. 154-155). In thus understanding asceticism and chastity, and their beneficial functions in life, we see that they occupy a place mid-way between the artificially exaggerated position they once held and that to which they were degraded by the inevitable reaction of total indifference or actual hostility which followed. Asceticism and chastity are not rigid categorical imperatives; they are useful means to desirable ends; they are wise and beautiful arts. They demand our estimation, but not our over-estimation. For in over-estimating them, it is too often forgotten, we over-estimate the sexual instinct. The instinct of sex is indeed extremely important. Yet it has not that all-embracing and super-eminent importance which some, even of those who fight against it, are accustomed to believe. That artificially magnified

conception of the sexual impulse is fortified by the artificial emphasis placed upon asceticism. We may learn the real place of the sexual impulse in learning how we may reasonably and naturally view the restraints on that impulse. (p. 156)."

The course which the regulation of marriage has run during the Christian era in Christian countries is thus summarised by our author :—

"Marriage began as a private arrangement, which the Church, without being able to control, was willing to bless, as it also blessed many other secular affairs of men, making no undue attempt to limit its natural flexibility to human needs. Gradually and imperceptibly, however, without the medium of any law, the Church gained the complete control of marriage, co-ordinated it with its already evolved conceptions of the evil of lust, of the virtue of chastity, of the mortal sin of fornication, and, having through the influence of these dominating conceptions limited the flexibility of marriage in every possible direction, it placed it on a lofty but narrow pedestal as the sacrament of matrimony. For reasons which by no means lay in the nature of the sexual relationship, but which probably seemed cogent to sacerdotal legislators who assimilated it to ordination, matrimony was declared indissoluble. Nothing was so easy to enter as the gate of matrimony, but, after the manner of a mouse-trap, it opened inwards and not outwards ; once in, there was no way out alive. The Church's regulation of marriage while, like the celibacy of the clergy, it was a success from the point of view of ecclesiastical politics, and even at first from the point of view of civilization, for it at least introduced order into an often chaotic society, was in the long run a failure from the point of view of society and morals. On the one hand, it drifted into absurd subtleties and quibbles ; on the other, not being based on either reason or humanity, it had none of that vital adaptability to the needs of life, which early Christianity, while holding aloft austere ideals, still largely

retained. On the side of tradition this code of marriage law became awkward and impracticable ; on the biological side it was hopelessly false. The way was thus prepared for the Protestant re-introduction of the conception of marriage as a contract, that conception being, however, brought forward less on its merits than as a protest against the difficulties and absurdities of the Catholic Canon law. The *contractive view*, which still largely persists even to-day, speedily took over much of the Canon law doctrines of marriage, becoming in practice a kind of reformed and secularized Canon law. It was somewhat more adapted to modern needs, but it retained much of the rigidity of the Catholic marriage without its sacramental character, and it never made any attempt to become more than nominally contractive. It has been of the nature of an incongruous compromise and has represented a transitional phase towards free private marriage. We can recognize that phase in the tendency, well-marked in all civilized lands, to an ever-increasing flexibility of marriage. The idea, and even the fact, of marriage by consent and divorce by failure of that consent, which we are now approaching, has never indeed been quite extinct. In the Latin countries it has survived with the tradition of Roman law ; in the English-speaking countries it is bound up with the spirit of Puritanism which insists that in the things that concern the individual alone the individual himself shall be the supreme judge." (pp. 386-387).

As regards the marriage system of the future (in Christendom), Dr. Ellis writes :—

"The marriage system of the future, as it moves along its present course, will resemble the old Christian system in that it will be willing to recognize a sacramental character in the sexual relationship, and will resemble the civil conception in that it will insist that marriage, so far as it involves procreation, shall be publicly registered by the State. But in opposition to the Church it will recognize that marriage, in so far as it is purely a sexual relationship, is a private matter the conditions of which must be left to

the persons who alone are concerned in it; and in opposition to the civil theory it will recognize that marriage is in its essence a fact and not a contract, though it may give rise to contracts, so long as such contracts do not touch that essential fact. And in one respect it will go beyond either the ecclesiastical conception or the civil conception. Man has in recent times gained control of his own procreative powers, and that control involves a shifting of the centre of gravity of marriage, in so far as marriage is an affair of the State, from the vagina to the child which is the fruit of the womb. Marriage as a state institution will centre, not around the sexual relationship, but around the child which is the outcome of that relationship. In so far as marriage is an inviolable public contract it will be of such a nature that it will be capable of automatically covering with its protection every child that is born into the world, so that every child may possess a legal mother and a legal father. On the one side, therefore, marriage is tending to become less stringent; on the other side it is tending to become more stringent. On the personal side it is a sacred and intimate relationship with which the State has no concern; on the *social* side it is the assumption of the responsible public sponsorship of a new member of the State. Some among us are working to further one of these aspects of marriage, some to further the other aspect. Both are indispensable to establish a perfect harmony. It is necessary to hold the two aspects of marriage apart, in order to do equal justice to the individual and to society, but in so far as marriage approaches its ideal state those two aspects become one. (pp. 387-389).

A long chapter is devoted to *The Art of Love*, as "it involves the whole erotic discipline of marriage," and its significance is great "for the welfare and happiness of the individual, for the stability of sexual unions, and indirectly for the race, since the art of love is ultimately the art of attaining the right conditions for procreation." Our author says, "There has been a failure

in the fundamental art of love. If we are to counterbalance facility of divorce our only sound course is to increase the stability of marriage, and that is only possible by cultivating the art of love, the primal foundation of marriage." In this connection the author acknowledges the superiority of ancient Hindu writers on the art of love (*Kāma-s'āstra*). Of Vatsyāyana, he writes, "In the lengthy preface to the French translation of Vatsyayana, Lamairesse points out the superiority of Indian erotic art to that of the Latin poets by its loftier spirit, and greater purity and idealism. It is throughout marked by respect for women, and its spirit is expressed in the well-known proverb, 'Then shalt not strike a women even with a flower'." The book under review will long occupy a foremost place among modern works on the Art of Love and Marriage.

Other Men's Lives :—*A Study of Primitive Peoples.* By Sir George Dunbar, Bt. (Nicholson and Watson, London, 1938). Pp. xiv+354. 10s. 6d. net.

Under the name of "primitive peoples" the author includes, with doubtful propriety, both prehistoric races and the now-extinct Tasmanians, the present-day North American Indians, and the Abors and their neighbours of the Tibeto-Indian border. His account of prehistoric man in the

Old and the New Stone Ages gives only the broadest outlines, except that a comparatively more detailed account of American prehistory is given. The Tasmanians are described as a link with the Past who carried the Palæolithic Age into the nineteenth century. A generalised account of the North American Indians is given in about 125 pages. But the most interesting and informative part of the book is the author's account (covering some 115 pages) of the uncontaminated Abors and their neighbours about whom very little literature exists and with whom the author had opportunities of personal contact for over four years.

In the Abor and Galong country, socially more advanced compared to the Dafflas and Mishmis, the community consists of elected headmen, the priest, the smith, the groups of families, the youngmen and the slaves. Canvassing for election is known. The only village council which the author attended reminded him of "a rather lively meeting in Hyde Park." Among the Abors the nearest relations, preferably male, of a deceased *miru*, who possesses the required qualification is proclaimed in his stead. The Galongs do not seem to recognize a definite hereditary claim. The Galong *mirus* do not wear distinctive ornaments, as in the Abor country. Almost every village of any size has its smithy. No raw materials are worked, and the smiths depend on imported metal. In the open and prosperous centre of the country there are Galong and Abor villages where pottery is extensively made and bartered with neighbouring clans.

The position and influence of women among these tribes is remarkable in spite of the fact that they do not inherit property. Affection and care of children is manifest throughout the hills. A boy's education consists in telling him the past history of his people, tales about animals, stars, *etc.* The hillmen are a musical people. The most usual instrument is a gourd-pipe. The Abor harp is a bamboo splinter with its centre cut into a vibrating tongue and two pieces of thin fibre. Infant marriage is unknown. Prenuptial license is condoned. The Abor marries the first girl who has a child by him, provided that there is no consanguinity bar". A man cannot marry a blood-relation of his own group. From the time a girl decides upon her future husband, the successful suitor gets her parents' consent to the match through his nearest relations as intermediaries. "From then onwards the girl ceases all promiscuous intercourse and her only visitor (at the maidens' dormitory or at her parents' house) is the man to whom he is engaged." When an Abor couple are in a position to start their married life together, the villagers build a house for them as a wedding present, and if the bride-groom can afford it he gives a house-warming party at which there is unusually heavy drinking. No special religious rites in connection with marriage have been discovered." An Abor woman expecting a baby must not eat a Doric pheasant, for its meat is believed to cause spots and markings on the child.

Slavery is in vogue among the Galong and

Abor tribes, but slaves are well looked after, though the master has the power of life and death over them. A male slave has a right to a wife, and if there is no suitable girl in his master's household, the master has to buy one for him. Village trials take the form of ordeals. Affirmation is commonly made by pointing to the sky and stamping on the ground, to call both these elements to witness. The most solemn oath is to swear by the sun and the earth, lay hold of the horn of the *mithan* and say :—"May this animal's horn pierce me if I am false." By the tribal laws of inheritance the eldest son gets two-thirds of his father's property and the youngest son the remainder. The other sons are left nothing and may have to depend upon the more fortunate brothers. Daughters inherit nothing at all. The heir has to support the widow or widows. In the absence of sons, the nearest male relation is the heir and has to perform the obsequies of the deceased owner. The dead are ordinarily buried in a contracted position, with face to the south and head towards the west. The grave is lined with leafy branches and floored with wood upon which the corpse is laid wrapped in a grave-cloth. Beside it are placed a bead-necklace and a brass plate or an earthenware bowl. A pine-roof is made over the body and on this earth is thrown. Above the grave a little hut is built, and about it are hung some of the possessions of the deceased. In this little house, *apong* and rice are left and a fire is kept up as long as the hut remains in

good repair, which for a headman may be for a year or more. "The religion of the people amounts to watchful struggle against threatening demons." "In sickness and in health, on the fields at seed-time, when hunting in the forest, in the agonies of death and in the burial rites that follow, the one hope is that the *miru* may appease the spirits of the unseen world. Yet, through all this, there persists the feeling...that above the spirits with which hillmen have to do, there does exist a Supreme Being, one of whose names, literally translated, means 'All-loving'."

This popular study of certain primitive peoples is written in a non-technical style and is informative, delightful and interesting reading.

FOLK-LORE.

Traditions and Customs of Cheshire:—By Christina Hole; with a Foreword by F. F. Potter. (Williams and Norgate, 1937) Pp. xiii+214. 6s. *net*.

In this delightful volume a number of interesting ancient traditions, folk-beliefs, customs and 'superstitions' of Cheshire have been collected with painstaking care and set forth in an easy matter-of-fact style. The traditions and customs dealt with in the book have been classified into eleven heads as follows:—

1. Life's Occasions, or Every-day Events of Life; 2. Farming; 3. Birds and Beasts and Living

things ; 4 Wells and Water ; 5 The Spring of the Year ; 6. Wakes and Fairs ; 7. Dark Winter ; 8. Trouble and Disgrace ; 9. Ghosts and Boggarts ; 10. Admirable Curiosities ; 11. Tales and Traditions.

The book is a valuable contribution to British folk-lore, and it is to be expected that similar volumes for other parts of the British Isles will before long enrich English folk-lore literature.

Archæology and Art.

Art and Archaeology Abroad:—By Dr. Kalidas Nag, (University of Calcutta, 1938) Pp. ix+125+29 plates.

The author, who is a distinguished Professor of Ancient Indian History and Culture in the University of Calcutta and is also well-known as the organiser and Secretary of the Greater India movement has laid Indian students of Art and Archaeology under a deep debt of gratitude by the preparation of this volume. It purports to be a report, written in the light of personal study and examination, of (1) the special arrangements and provisions for the collection and co-ordination of the data of arts and archæology in various universities and research centres in Europe and America as well as in the Near East, (2) the methods of the teaching of those subjects in those Universities, and (3) the facilities for research and personal contact available to Indian students in certain centres. The learned author was invited by the International

Educational Institute (under the Carnegie Foundation), New York, to deliver a series of Lectures on Indian Art and Archæology as Visiting Professor to the Institute in 1930-31, and at the same time he received invitations from the League of Nations, Geneva, to study from within the intellectual Co-operation and other activities of the League as a Collaborator, and another invitation from the Geneva School of International Studies. The Calcutta University with its accustomed zeal for the encouragement of learning and research came to the help of Dr. Nag by granting him the Ghose Travelling Fellowship for that year. And the present work is one, and not the least, of the results of the studies that the author was thus been enabled to undertake. Outside the official organization of the Archæological Survey of India, as Dr. Nag points out in India, "the museum and research societies under non-official management are still in a state of suspended animation if not of positive stagnation". And we cannot insist too much on the urgent need for the adoption in India of a "systematic and progressive policy to ensure the conservation of our national patrimonies and the intensive study of our pre-historic remains". As Dr. Nag says, "Every cultural organization of India from the remote rural schools to the colleges and universities should co-operate in this national work of this country-wide exploration, collection and study of the artistic and cultural documents of India. Every province and every large linguistic and cultural unit should maintain a research library and a museum and, above all,

the big universities should develop, without any more delay, their special museums according to the peculiar nature of their regional collections and specializations of study. Thus Prehistorics and Ethnology, Archæology and Art, Natural History and Anthropology, Folk-arts or village-crafts would find naturally their special museums to focuss the attention of the public and help in the final synthesis in studies and research".

Studies in Indonesian Culture :—*Oirata, A Timorese Settlement on Kisar.* By J. P. B. De Josselin De Jong (Uitgave Van De N. V. Noord-Hollandsche Uitgevers-Maatschappij-Amsterdam, 1937) Pp. ii+289.

This is the first part of the record of the results of ethnological and linguistic field work carried on by the author in the Malay Archipelago under the auspices of the Rockefeller Foundation. This first study of the series embodies the results of five weeks of field work in Oirata, a village in the south-eastern coastal region of Kisar, founded about 1725 A. D. by Timorese immigrants. So far as we know, this is the pioneer study of the language and some other elements of culture of Oirata. The author adopted the best and most fruitful way of approach to Oirata culture, namely, through a preliminary study of the language of the people. After giving a short account of the village of Oirata and its people, clans and lineages, 'caste' divisions, a kinship terminology, demographic data, a list of proper

names of individuals, a population register,—the author gives, in original and translation, the central tribal myth relating to the creation of the world, of nature as we know it, of man and the earliest ancestors of the Oirata people, their wanderings and adventures during the mythical period between primeval creation and the definite arrangement and grouping of all beings and things in their proper places and functions and the ultimate foundation of the present-day village of Oirata by the human descendants of those supernatural beings who, in Oirata as in any archaic culture, are the chief actors in historical tradition no less than in religious speculation. "The two decisive acts of creation, according to the myth, are the sexual union of sky and earth, in which originate, directly or indirectly, all beings and things, and their separation which gives the cosmos its definite aspect and allows the performance of minor creative acts of a complementary nature." The myth is specially concerned with the repeated separation of elder and younger branches of the original lineage and the ensuing migration. This is indeed what we find in the traditions of migrations of most tribes in India and elsewhere. One notable feature of the Oirata origin myth is the division of the people into three castes and the rigour of caste-endogamy in former times. The association of most of the heroes of the myth with the sun, the moon, and gold is of special interest to us in India where we are familiar with the reputed solar and lunar lineages of the heroes and royal dynasties of ancient India and their present-day descendants or pseudo-descendants. The author suggests a connection between the Oirata's dualistic

conception of the universe and society with "two phratries and sexes, strength and weakness, good and bad, contrasts of colour, and so on." The author is on firmer ground when he says, "Myth is concerned with the things that are of vital interest to a human community—according to its own standards. These vital interests most clearly manifest themselves in the application of religious cosmology to the realities of life, in other words, the practice of religious ritual. This also explains why myth itself, formulating and accounting for the cosmological conceptions, has all the characteristics of a fixed ritual not naïve cosmography." Besides an ethnological analysis of the myth,—phonetical notes, elaborate grammatical notes, and an exhaustive vocabulary, add to the value of the book. This volume is indeed a model of what a field-study of this nature should be. And we eagerly look forward to successive volumes of these valuable "Studies in Indonesian Culture."

Linguistics.

The Birth of Language :—*Its Place in World Evolution and its Structure in Relation to Space and Time.* By R. A. Wilson (Dent, 1937). Pp, XI + 202. 8s. 6d, net.

In this book the author has attempted a philosophical exposition of language as "one step or cycle in the general evolution of the world, a cycle which includes the following phases : the emergence

of conscious mind in the world and the new problem that emerged with it, the birth of language in answer to this problem; the materials from which language was made, the metamorphoses it underwent in reaching its final form, its structure in relation to space and time, and its unique character among other phenomena of the world." The author's view of the origin of human speech is thus summarised:

"The life and mind of the world, which in its time-evolution rises steadily upward through the cycles of insentient and sentient life, eventually comes to a focus in the organism and mind of man, breaks through the enveloping forms of space and time, and emerges into free and conscious individualities. The world which was formerly a single sensuous world, in rising into this new cycle of its evolutions breaks in a manner into two worlds. The sensuous space time world of nature is duplicated by the supra-sensuous space-time world of mind, which emerges now, radiating from individualized mind-points, and holds all space and all time its single view... If there is any reality in the theory of the organic unity of the world and the natural evolution of its successive aspects in time, then man is the world at that point where it awakens to consciousness and turns back upon itself to explore and know its own nature; and this self-exploration, and the growing records of its results in language, constitute a new cycle in world evolution. To accomplish this task of elaborating a new supra-sensuous world, patterned after the sensuous world of nature, man, with his newly emerged conscious mind, had to have for his new world-building material supra-sensuous symbols, freed, in some way or other, from the sense-limiting media of space and time. Specically, he required time-symbols lifted above the evanescence of time, and space-symbols released from the fixity of space. Starting with his own natural sounds, which as time-expressions were the natural symbols for the time-process of intellecting the world, but which in their natural state could express time-manifestations only, man first

transmilted these natural sounds into definite and conventionalized sound-symbols, which could express manifestations of space as well as time, and in this way made the adequate biform instrument for the transformation of a biform world. Next, to preserve this sound-language from the evanescence of time, man succeeded, after long experimentation, in translating his sound-symbols into corresponding space-symbols so as to secure permanence, without, however, destroying or altering the time movement of oral speech. By this translation and consequent amalgamation of the symbols of time and space, so that the content could without alteration be expressed in either of these sense-forms, man gained for language that spaceless and timeless character which corresponds to the nature of free and conscious mind; motion and rest, change and permanency fused in a single synthesis where each retains its own nature while freed from its own limits..." (pp. 190-192).

In language, and in language alone, the mind has attained full freedom, has created an efficient instrument for the elaboration of its new world—the double world of space and time in which man lives. The author passes in review earlier theories of language and points out what he considers their defects. As against Darwin's denial of any fundamental difference in the mental powers of man and of animals, and his view that the sounds of animals do not differ in kind from the language of man except in the *degree* of distinctness, Prof. Wilson writes, "The significant difference between man and the animals, which opened the way to articulate language for man, while restricting animals to natural cries, seems to be a difference in the central unifying faculty, and not in its subordinate agents (*e.g.* imitation, attention, memory, imagination, *etc.*). The barrier between animal and man, our author points out, is one of time and space, and language

has a space-time structure. The book compels our attention and interest by its original view-point.

Sociology.

The Untouchable Classes of Maharashtra.
By M. G. Bhagat, M.A. (Reprinted from the *Journal of the University of Bombay* July, 1935). Pp. 55. Re. 1.

In this careful and interesting brochure the author gives a short account of the present economic and social condition of the 'untouchable' classes of the Mahrāthā country, their social handicaps and disabilities, and suggests practical methods for their uplift. The author has taken considerable pains in collecting statistics from about 589 families, in different districts of the Mahrāthā country, belonging to different untouchable castes (Mahar, Chamar, Mang, Dhor, Bhāngi). These statistics reveal that the average size of a family there is larger than the average Indian family, that there is a deficiency of females except in Nasik and Khandesh and among the Māhārs and the Mangs of the Ahmedabad district, though the general proportion on the whole agree with the average Indian proportion. The following conclusions are also borne out by the statistics collected :—There is universality of marriage; there is a practice of early marriage on a large scale; the proportion of widows is large; and infant mortality is very high. The percentage of literacy is low, but is

comparatively higher among the Chāmār, and is in general higher than what was recorded in the Census Report of 1931. A majority of these people are dependant upon their hereditary occupations. The percentage of male earners is roughly uniform, being 48 p. c. in all cases except among Bhāngis,—33 p. c. of Bhāngi women being employed, and the Mangs having a larger percentage of female earners than the other untouchable castes. Only 32 per cent of untouchable families have a monthly income of above Rs. 5 but less than Rs. 10, and 24 per cent have a monthly income of less than Rs. 5. Thus compared with agriculturists these castes are economically extremely backward. But on marriage purposes they spend extravagantly and in consequence most of them “are born in debt, live in debt, and die in debt.” The author concludes this interesting paper (originally contributed to the *Journal of the University of Bombay*, for July, 1935) with a short statement of the grievances of these untouchable castes and suggests remedies, such as removal of untouchability by law, and extended facilities for education, and by measures calculated “to undermine the exclusivist spirit of caste.” Such intensive and careful analyses of the depressed class population in different parts of India will prove very helpful and valuable to the sociologist as much as to the social worker.

Slavery Through the Ages. By Lieut-General Sir George Macmann. (Nicholson and Watson, 1938). Pp. xv + 279. 12s. 6d. net.

This volume gives a detailed survey of Slavery from the earliest known times to the present. The author has made a careful historical review of the subject, in the light of intimate knowledge, traces the origins of slave-owning and slave-trade throughout the world. A vast amount of interesting information has been collected, collated, and methodically presented in this book; even a short reference to the Slave Dynasty at Delhi founded by Altamish or Altamash is not omitted. Reference is also made to such remnants of Slavery in British India and Burma as still linger. These are:—(1) Actual slavery, the results of slave-raiding and slave-breeding in most inaccessible pockets of the Himalayas and the upper basin of Irrawady; (2) "A debt bondage of ancient custom among the depressed and aboriginal races of India"; (3) "A harmless hereditary slavery that is entirely unsupported by law, but is willingly maintained and observed in some portion of old feudal India, and is breakable at will."

As results of the slave-system, both of ancient and modern times, "in nearly every country in Europe, for instance, some unsatisfactory condition, fixed in the days when slave-holding was part of the system, still exists." General Macmann suggests that "it is probable that some of the fierce and unreasoning passions that Communism is able to raise are due to an old inherited slave-complex." The author goes so far as to suggest that "the bitterness of the Irish, which have been given an anti-English twist, is just as likely

to be due to an instinctive memory of the slavery that other Milesians and other Celts imposed on Formerian, Iberian, and other predecessors, as to any injuries at the hands of the Norman English." The book is packed full with the details of the age-long woeful story of slavery, and is redolent of the fragrance of deep human sympathy.

Nationalism and the Communal Mind. By E. Hanbury Hankins (Watts. 1937). Pp. xv+199. 7s. 6d. *net*.

In this book the author attempts a psychological study of the nature of nationalism and seeks to trace its origins in the mental influences that have come down to us from the pre-historic past and on which suggestion may work. By comparison with other parts of man's mental constitution, similar in origin and character to the national feeling, an insight is sought into its source and nature in order to understand the relations between the feelings of national dignity on the one hand, and on the other hand the form of national feeling that plunges nations into war with each other. The author finds in certain ancient customs of past generations features of mental equipment such as jealous self-assertion similar to nationalism. Our author's definition of Nationalism is the "self-assertion of the cave-man within us." In primitive cannibal-

ism, the ancient and savage practice of drinking the blood of the slain enemy or painting themselves with it, or bathing in the enemy's blood, blood-brotherhood ceremonies, head-hunting, certain customs connected with funeral feasts, the use of the skull as a drinking cup, the ancient and medieval flaying of war-prisoners, immolation of widows (*sati*) on the death of their husbands once prevalent of old not only among Hindus but among the Scandinavians, the Slavonians, and the German Heruli, human sacrifices (to the water-spirit) in flowing water, foundation sacrifices, the sacrifice of first-born children in ancient Russia, Ireland and elsewhere, the human sacrifices by the ancient Greeks to Dionysus or Bacchus, by the ancient Hebrews to Moloch, by ancient Hindus to the goddess *Kālī*, and by certain existing primitive tribes to their blood-thirsty deities or spirits, the ancient custom of King-killing (as in Babylon and Ethiopia, in Calicut and Quilacare in Southern India), and in similar other persistent customs and modes of thought which have lasted through long ages with but little change. though they have been progressively losing their hold throughout the historical stages particularly among the more advanced races of mankind, our author finds a clue to the nature and origin of Nationalism. The feeling, says our author, can exist in two forms, namely, as national self-respect or as national self-assertion; of these the former makes for peace and the latter resembles an inferiority-complex and

tends to war. "A due stimulation of national self-respect will be the safest and most practical way of dealing with national self-assertion. The desire for national self-assertion is connected with an unexpressed and perhaps unfelt national depreciation. National [self-] depreciation may be cured by suitable recognition of achievements of one's fellow-citizens. In all national celebrations or festivals, national dignity is best served if all references to enemies or rivals is omitted." National self-assertion is aroused by threats to national security. A sense of security is at the foundation of national self-respect. Consequently national dignity demands the possession of armed forces and also their occasional display for the purpose of giving to the public confidence in the security of their nation. According to Dr. Hankins, "Human nature being what it is, armed forces must be retained to ensure the feeling of security that is indispensable for national self-respect. Without such feeling of security, national self-respect changes into, or tends to change into, national self-assertion." He goes further and opines that—"The propaganda of internationalism has been harmful to national dignity through its disapproval of the use of national symbols, uniforms, and anthems."

Though we cannot subscribe to all the arguments and conclusions of our author, his analytic discussion of the nature and origin of nationalism is thought-provoking and on most essential points appear to be reasonable and sound. His ideas of

the origin of certain customs of primitive races will not appeal to most anthropologists, and his theory of the existence of the communal mind of the human species (with a sense of direction) from which the individual mind is derived would require more elucidation, explanation, and arguments than he has brought forward. His arguments against a general spirit of pacifism would hardly carry conviction with many people. Pacifism does not imply non-resistance to aggression, under *any* circumstances. Nor does internationalism appear to us to be a foolish fancy of faddists—an unattainable chimera. It would appear to mark a higher mentality—the extension of consciousness from self, family, community, or nation to humanity at large,—reaching out beyond communal and national consciousness to the consciousness of universal unity and brotherhood of man.

The Ideals of Humanity and How to Work :—

By T. G. Masaryk. Translated by W. Preston Warren and Marie J. Kohn-Holocek. (Allen & Unwin, 1938) Pp. 191. 6s. *net*.

The writings of Masaryk, the first President of the Czechoslovak Republic and the founder of Czech sociology, an eminent practical sociologist and in his earlier days a distinguished professor of philosophy, have an abiding interest for all students of human

sociology. Masaryk's idea of nationality was "a whole cultural programme ; one of his main doctrines was "to be always for the labourer, very often with socialism, seldom with Marxism.

With regard to individualism, he says :—
"I hold that all extreme individualism is false in principle, and for the simple reason that no ego exists or can exist alone..... There is no self just in and for itself. Extreme individualism fails morally and theoretically, because it places the human individual on an equality with God. This is not to say that the efforts of many modern individuals to develop strong individualities are unwarranted. That is a very different matter from the propagation of sheer individualism. Moderate individualism, really philosophic and ethical individualism, desires that in society, by united efforts and on the grounds of love, distinct types, characters, and personalities may be developed." (p. 51).

With regard to Evolution and the idea of Social Progress, Masaryk said, "Evolutionism, based on natural history, is not really a new doctrine. It is the ancient faith in progress presented in a new form, a historic doctrine scientifically formulated. Ethically the question arises for consideration : what inner motives move men to their scientifically inspired aspirations and strivings ? Modern evolutionism can provide no answer to this question. We are learning more and more that what we have attained—and it is exceedingly imperfect—has developed throughout thousands of years, and that progress is only slowly effected. There are no leaps in history ; no miracles will happen. Such a faith in progress does not contradict the fact that in certain fields there are retrogressions ; decadence may occur. Every nation may find itself for a moment at a standstill or in a period of decline. Definitive decadence is even possible as is demonstrated by the Romans, Greeks, and other nations which have disappeared..... This faith (in Progress) is justified, however soberly we consider the matter. This faith has something religious in it. If hope in the future is the essence of religion, and if religion strengthens men by inculcating this hope, then evolutionism has a religious

nature. Men accept this doctrine exactly as they have accepted, and are accepting, faith in immortality. This is a valuable element in evolutionism." Masaryk's view of Work is: "To work means to fight ugliness, wickedness, evil, and to fight them constantly. We should fight them everywhere and strive to nip them in the bud." "To progress means to overcome what is evil." Man is by nature weak. He is not, however, fundamentally bad. That is why we can, with the co-operation of all, effect progress." "It is not matter or body which is the source of evil; it is mind. Impurity is not rooted in matter or in body; it arises from spirit." "The hope of eternal life is the basis of our faith in life; life and work depend on faith." "The modern theory of progress and evolution is a theory of work, unconscious and conscious." "Progress must be made in accordance with ethical principles." "Individualism is in my opinion far more warranted than collectivism, which would completely destroy individual opinion and conscience. But individualism must be completed by collectivism."

Such are a few samples of the contents of this stimulating volume. Though the reader may not see eye to eye with each and every view held by the father of the Czechoslovakian republic, his thought-provoking writings are full of thrilling interest to Indian students of sociology and politics. The translator, Dr. Marie J. Kohn-Helveck, is to be congratulated on the clearness and perspicuity of the translation.

Food Planning for Four Hundred Millions.
By Radhakamal Mukerjee. (Macmillan, 1938)
Pp. XVIII + 267 7s 6d net.

In this book the author, in the light of careful personal investigations, makes a systematic

survey of the relations between agriculture, nutrition, and population in India. He fixes up two theoretical standards, one for Northern India and another for Bengal and Southern India, and on the basis of these standards scrutinises various peasant- and working-class diets, collected from different Provinces, and exposes their defects. He estimates for India, a food deficiency for 12 per cent of the population in a year of normal, harvests. This as Dr. Mukerjee points out, would require a new population policy and systematic food and crop planning on a country-wide scale, based on the sciences of economics, agriculture and nutrition and guided by true social foresight. Besides a forward programme of industrial planning,—a more vigorous tariff policy, and encouragement of inter-provincial migration and overseas settlement are suggested as methods to be adopted to mitigate the present over-crowding in agriculture. Revival of the small family system of the past and a country-wide birth-control propaganda are advocated by the author, together with “mass sanitation” to secure a reduction of mortality and an increase of average longevity, and an eugenic programme including the introduction of inter-caste marriage and widow re-marriage and the abolition of hypergamy, dowry and bride-price, and a re-orientation of the social attitudes towards manual labour, are some of the methods advocated by the learned author as calculated to solve the present economic problem of India. Though difficulties in the application of a few of these methods may be expected,

and opposition to a few of them may not be quite-unreasonable, the author's suggestions and arguments call for careful consideration. The wealth of facts and statistics collected by Dr. Mukerjee testify to patient and discriminative research. The book will prove of valuable help to our social workers and administrators as also to students Indian Economics.

Grammar of Politics :—By Harold J. Laski,
(George Allen & Unwin. Fourth Edition 1938)
Pp. 672. 12s.6d net.

This is the fourth edition of a standard work written by a distinguished social and political thinker. No serious student of sociology and Politics can afford to overlook the view-point presented, and the principles set forth and lucidly discussed and brilliantly developed in this notable work. As our author says, the State is in essence an expression of class-relations " and that, now, "at the end of the feudal period a re-definition of class-relations has become necessary, if we are to secure a full exploitation of the resources at our disposal". Prof Laski wrote in 1934, in the Preface to the third edition of the book,—“ Time has reinforced rather than diminished the truth of the central principles it is sought to lay down. The necessarily federal character of society ; the incompatibility of the sovereign state with that economic world-order so painfully struggling to be born ; the antithesis between individual property rights in the essential means of

production and the fulfilment of the democratic idea ; the thesis that liberty is a concept devoid of real meaning except in the context of equality ; the refusal to regard law as valid merely in terms of the formal authority from which it emanates ; the argument that in any society, even when based on equal and universal suffrage, the existence of serious economic inequalities biases the incidence of government in favour of the rich,—all these seem to have received explicit confirmation from the events of the last decade'. Besides discussing theoreticl issues in political philosophy, and dealing with the political system as it manifests itself in legislation and administration and in the courts and economic enterprises, Prof. Laski puts forward practical proposals for the readjustment of legislative and administrative, judicial and economic institutions on the basis of the social and political philosophy or ideologies and principles to which his experience and researches lead.

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I. UGRIAN FISHING IMPLEMENTS AND SOME INDIAN PARALLELS.¹

By

BIREN BONNERJEA, D. LITT. (*Paris*), F.R.A.I.

(*Royal Hungarian University, Budapest.*)

In a recent paper² I demonstrated some linguistic and ethnological similarities between the Finno-Ugrians and the Muṇḍā peoples of India, and expressed my opinion that these two groups of languages are genetically connected. The present paper has been written after great hesitation to show certain similarities in the fishing culture of these peoples. An almost complete lack of documentary evidence in the libraries of Budapest must be taken as an excuse for the paucity of Indian data, but it is hoped that those in India will be able to follow up the leads given here; and hence more emphasis has been laid on the Ugrian material, and the Indian data are given merely as comparative material. It may also be

¹ The bulk of the Ugrian material contained in the present paper is taken from my "La pêche chez les peuple finno-ougriens," *L'Anthropologie*, xlix (Paris, 1939) [In Press].

² Bonnerjea, "Traces of Ugrian Occupation of India," *The Indian Culture*, iii (Calcutta, 1937), pp. 621-632.

pointed out that the final solution of the vexed problem of Finno-Ugrian and Mundā affinities will be found neither in linguistics nor in physical anthropology; but ethnographical evidence will turn the balance—either in favour of the hypothesis or against it—in the long run.

The Ugrian branch of the Finno-Ugrian stock comprises the Ostyak and the Vogul—forming the so-called Ob-Ugrians—and the Magyars. The Ob-Ugrian name for themselves is *men-dsi* or *man-si*.³ At the present time they inhabit the banks of the Ob and the Irtya and their tributaries, east of the Ural mountains, in the former governments of Tobolsk and Tomsk. The Magyars⁴ are the inhabitants of Hungary and Transylvania (now part of Roumania); many have emigrated in recent years to Finland and to the United States, and many are found in Yugoslavia and in Czechoslovakia. The Magyars are closely related to the Ob-Ugrians. Presumably the ancestors of these two peoples separated from the other Finno-Ugrian peoples about 2000 B.C. After their separation from the original stock the Magyars emigrated westwards, came in contact with peoples of a higher culture, and were themselves developed into a cultural nation. The Ob-Ugrians, on the other hand, remained at about the same level of culture as they had when the separation took place. In course of time their culture too became impreg-

³ Bonnerjea, *op. cit.*, p. 624.

⁴ For a short sketch, see Bonnerjea, "Scraps of Hungarian Folk-Lore," *Notes and Queries*, clxxii (London, 1937), pp. 290 sq.

nated with Russian influence. The word "Jugra" is met with an early document,⁵ and this was the name of the place where the Ostyaks and the Voguls lived. We cannot definitely identify where Jugria was situated, but it was probably at the head of the Pecora. Anthropologically the Ob-Ugrians show a strong admixture; in the north they have Samoyed blood in their veins; and in the south, Tatar and Russian. The Magyars are derived from a mixture of Turco-Tatars and Volga Ugrians in which the Caucasian-Mongolian element has also played a part⁶

Concerning the importance of fishing in general among the Finno-Ugrians one author states: "As philology proves, the primitive Finno-Ugrian peoples subsisted by hunting and fishing."⁷ And a modern linguist expresses an almost identical opinion where he says: "From a comparative study of the vocabularies of the Finno-Ugrian languages we may be convinced that the proto-Finno-Ugrians were chiefly hunters and fishers; the words which designate fish (Hung. *Hal*; Ost. *xül*; Vog. *kul*; Cher. *kol*; Mord. *kal*; Finn. *kala*; Lapp.

⁵ For a complete account of the word and the concepts, see M. Zsirai, *Finno-ugor népnevek. I. Jugria.* Budapest, 1930.

⁶ L. Bartucz, *Honfoglalaskori magyar koponyak. Altungarische Schadel* [Ethn. Samm. Ung. Nationalmus. v. Budapest, 1926], p. 23; *Id.*, in *Anthropologiai Füzetek, passim.*

⁷ U. T. Sirelius, *L'origine des Finnois* (Helsinki, 1925), p. 33: "*Le peuple primitif finno-ugrien se nourrissait par la chasse, et la pêche, comme le prouve la philologie.*"

kuölle) are proto-Finno-Ugrian."⁸ To carry this linguistic evidence further it may be mentioned that von Hevesy says that the Magy. *hal* is the same as the Mundā *haiko* or *hako* where the *-k-* is probably a diminutive ending, and the phonetic change *l~y* is common.⁹ If that is correct, it would be a strong evidence in favour of von Hevesy's Mundā-Finno-Ugrian hypothesis.

Coming now to the Ob-Ugrians we find that fishing was one of their principal occupations from very early times. The Ob is the richest river in the world for fish. This is said to be due to a soft and muddy river bed, and a weak current; but it is for the same reason that salmon do not come up the river, for they prefer a rocky bottom and a strong current.¹⁰ The water supply them not only with food to eat, but also with clothes to wear. Müller (1716) mentions the fishskin clothes of the Ostyaks. Pallas (1776) says that they had raincoats made of fishskin which they could cook in case of famine.¹¹ The window-panes

⁸ C. Tagliavini, *Le lingue ungherese e il problema delle origini dei Magiari* [Repr. from *Revista Corvina*, xxi-xxii. Budapest, 1932], p. 12: *Dallo studio comparative del vocabularie delle lingue ugrofinniche noi ci possiamo convincere che i popoli proto-ugrofinnici erano prevalentemente cacciatori e pescatori; sono così proto-ugrofinnici il nome che designa il pesce.*"

⁹ W. von Hevesy, *Finnisch-Ugrisches aus Indien* (Vienna, 1932), p. 334; *Id.*, "Noms ouraliens d'animouk dans l'Inde," *Journal Asiatique*, cxxiii (Paris, 1937), Repr. p. 5.

¹⁰ A. Ahlqvist, *Unter Wogulen und Ostjaken* [Acta Soc. Scient. Fenn., xiv. Helsinki, 1885], pp. 53 sq.

¹¹ If I am not mistaken one of these fishskin coats is to be seen in the British Museum, London.

of a Vogul yurt, hut, are made of fishskin.¹² According to Sirelius the happiest time in the life of an Ostyak is when there is a good catch.¹³ Fishing is of paramount importance for the Voguls on the Sosva. In spring as soon as the water begins to recede they gather together in large numbers at the mouths of rivers and on sandbanks, where they build tents or huts, and remain there fishing for the whole summer.¹⁴ And of the amount of fish caught by the Voguls at the fishing villages on the Sosva, no one who has not actually seen it with his own eyes can form an idea of what the yearly catch can be.¹⁵ Finally the Konda Voguls live on the Konda in summer, but elsewhere in winter.¹⁶ Talking of them Buschan says¹⁷ that the northern peoples of Asia live principally by hunting; those on river, by fishing; and those by the sea, by hunting whales, walruses and other mammals.

If further support be needed for proving the importance of fishing among the Ostyak, we may

¹² Ahlqvist, *op. cit.*, p. 35.

¹³ Sirelius quoted by I. Manninen, *Die finnisch-ugrischen Völker* (Leipzig 1932), p. 340: "*Ist der Fischfang ergiebig und erscheint Gottes Sonne warm, so ist der Ostjake der glücklichste Mensch auf der Welt. Er isst sich satt und liegt—, und genießt das Leben, ohne für den morgenden Tag zu sorgen... So lange, wie der Sommer währt und der Fischfang einigermaßen gut ausfällt, dauern auch für den Ostjaken die Tage des Gluckes. Er hat was zu essen und er isst, denn sein Appetit ist gewöhnlich gut.*"

¹⁴ Ahlqvist, *op. cit.*, p. 33.

¹⁵ Ahlqvist, *op. cit.*, p. 33; Manninen, *op. cit.*, p. 340.

¹⁶ Ahlqvist, *op. cit.*, p. 148.

¹⁷ G. Buschan, *Die Sitten der Völker*, ii. 248.

say that one of their best known household gods is the "Old One from the Ob," who is prayed to as a giver of fish. If there is a good catch a thanksgiving sacrifice is made to him. If, on the other hand, there is a poor catch, he is deprived of his clothes, beaten, a rope is tied round his neck, and injuries and vituperations are heaped upon him. They shout at him and say: "You rascal, were you asleep when we were praying to you? Could you not hear what we need? Or have you become so senile and stupid that you are no longer able to fulfil your duties as a god?"

Fishing was also one of the original occupations of the Magyars. According to Herman¹⁸ a certain form of fishing-basket is mentioned in historical documents as early as 1094. He further considered the fish-fence as belonging to the historical implements, and remarks that they were first mentioned in documents dating from 1268.¹⁹ The archæological finds in Hungary show that harpoon heads made of antler and provided with two barbs on one side and one on the other, appear for the first time in the Tisza culture period.²⁰ Documentary evidence shows that fishing reached its highest development at about the time of the battle of Mohács (1526); and some of the fishing implements go back to a remote

¹⁸ O. Herman, *A magyar halászat könyve* (Budapest, 1887), pp.

¹⁹ Herman, *op. cit.*, p. 154.

²⁰ F. von Tompa, *25 Jahre Urgeschichtsforschung in Ungarn 1912-1936* [Reprinted from 24-25 *Bericht der Römisch-Deutschen Kommission 1934-1935*], p. 43, and Pl. 13, Fig. 14.

past.²¹ An extremely primitive form of fishing found in Hungary is a noose attached to the end of a stick in the manner of a whip;²² this noose was thrown around the fish in the same way as a lasso, and quickly pulled taut, so that the fish was caught in the noose.

Fishing may roughly be divided into three broad divisions :—

- (1) Fishing with dams and weirs, including such accessories as spears, forks, traps, gaff hooks, lifting nets, and so on ;
- (2) Fishing with nets ; and
- (3) Fishing with hooks and line, generally known as angling.

The first of these,—dam, weir or fence fishing,—is usually in rivers or streams ; where there is a more or less a strong current, and the water is not too deep. Net-fishing is practised chiefly in lakes, open waters and sluggish streams ; and angling or hook-fishing, the least profitable of all, may be indulged in everywhere.²³ All of these methods are met with among the Ugrian peoples.

Beginning with fish dams and weirs among the Ugrians we have the authority of Pallas who in 1776 described the Ostyak fish weir and said that

²¹ S. Batky, in *Ethnologische Mittheilungen aus Ungarn*, ix (Budapest, 1905), p. 59.

²² K. Krause, *Vorgeschichtliche Fischereigerate und neuere Vergleichstucke* [Repr. from *Zeit. fur Fischerei*, xi. Berlin, 1904], p. 338.

²³ J. Hornell (in *Mem. As. Soc. Bengal*, viii. 1924) divides fishing into trapping devices, angling and netting. But this division could not reasonably include such implements as fish-forks, spears, and so on.

they were called *var* or *ver*.²⁴ These weirs were of two kinds: those which caught fish, and those which merely prevented them from going further. Munkácsi²⁵ tries to connect this Ost. *ver*, Vog. *vērē*, *vēri*, "Flusswehr zum Fischfang," with the Modern Pers. *vargh*, *vergh*, "Wasserwehr," and Skt. *vārga*, "Abwender, Beseitiger." And Sirelius²⁶ gives a detailed description of them. Patkanoff too mentions them and says that they are of native origin, and are spoken of in the legends and historical traditions of the Ostyaks.²⁷ Dunin-Gorkavicz²⁸ states that such dams were used in Surgut throughout the summer and autumn for fishing, but *only by the Ostyaks*, and not by the Russians. Varpakhovski²⁹ says that fish fences were quite common in the Tobolsk district, and were used especially in winter. Jankò³⁰ saw several of them among the Ostyaks. The first was

²⁴ P. S. Pallas, *Reise durch verschiedene Provinzen des russischen Reiches*, iii. 83.

²⁵ B. Munkácsi, in *Keleti Szemle* [*Revue Orientale*], iv (Budapest, 1903), p. 393.

²⁶ U. T. Sirelius, *Über die Sperrfischerei bei den finnisch-ugrischen Völkern* [Suomalais-Ugrilainen Seura—*Kansatietellisiä julkaisuja* III. Helsinki, 1906], pp. 47 sqq., 61, 62, 107, 108.

²⁷ S. Patkanoff, *Die Irtysh-Ostyaken und ihre Volkspoesie* (St. Petersburg [Leningrad], 1897), p. 26. Cf. *Id.*, *Tip ostyatskago bagat-wirya* (St. Petersburg, 1891), p. 33, cited by J. Jankò, *A magyar halászat eredete. Herkült der magyarischen Fischerei* [3te Asiatische Forschungsreise des Grafen Eugen Zichy. Budapest and Leipzig, 1900], p. 173.

²⁸ Cited by Jankò, *op. cit.*, p. 96.

²⁹ Cited by Jankò, *op. cit.*, p. 94.

³⁰ Jankò, *op. cit.*, pp. 174 sqq.

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made of laths and was fitted with trap, 2 mètres high. The second one was in the form of a V; and was made of poles; and at the opening there was a large basket trap. The third weir had a long-necked trap.

Fish fences are mentioned in Vogul mythology. In one of their cosmogonic myths, Numi Tarom instructs mankind as follows: "In winter you should set winter fish fences in large as well as small rivers in which the fish will lose themselves."³¹ In Munkácsi's translation of the same myth the word "fence" is omitted, and the word *czége*, "weir," is used instead.³² We have little information about fish dams among the Voguls. As early as 1853, Makariy³³ says that such were used, but does not describe them. Munkácsi³⁴ describes this dam as consisting of labyrinths, and leading to a circular enclosure from which the fish are unable to escape; he says that the Vogul name is variously *věre*, *věri*, and, as we have seen above, attempts to identify the word with a Sanskrit word. Weir-fishing, however, is quite common among them. In winter the Voguls on the Tavda and its tributaries construct weirs across the rivers and leave traps there in the openings; even women take part in this kind of fishing.³⁵

³¹ Herman, *op. cit.*, p. 92: "*Telen a kis folyot es Nagy. folyot teli fejzevel kosse at, a melybe a hal magától teved bele.*"

³² B. Munkácsi, *A Magyar népies halászat műnyelve* [Neprajzi Füzetek I, Budapest, 1893], p. 28; *Id. Vogul népkölt. gyűjt.*, i. 149.

³³ Cited by Janko, *op. cit.*, p. 92.

³⁴ Munkácsi, *A Magyar. nép. hal műnyelve*, p. 92.

³⁵ Ahlqvist, *op. cit.*, p. 32.

Weirs are of two kinds: one kind, the "Baeh-wehre," is made of thin laths, and has an opening; it is called $\bar{a}rpi$, $oarp$, arp or $oarep$. The other kind of weir is called $\bar{a}ri$, $\bar{a}r$, $\bar{a}ri$, or $\bar{u}sem$; it is used in rivers, and is made of poles tied crosswise to beams.³⁶

Fishing still holds an important place in Magyar life. Some of the primitive methods, such as weirs, *cège*, fish fence, *vejsze*, etc., are preserved from Ugrian times, that is, from before the Magyars were separated from the Ob-Ugrians. In later times Magyar fishing received a strong impetus from the Turks, and still later, from the Slavs—not only from the Russians with whom they came in contact on the Dneiper, but also from the Slavs of their own country. Last of all, German influence is also to be seen in Magyar fishing.³⁷

Of the fishing implements brought from Eastern Russia we have the bidentate fish spear or fork;³⁸ but Jankò³⁹ says that the "two-pronged fish fork is of Turkish origin." Of Russian origin is also the hook attachment for catching sturgeon.

Several types of weirs and dams are met with among the Magyars. The so-called Szekely weir is a stone dam in the form of a V, in whose opening there is either (a) a simple trap to which the fish is carried by the strong current and

³⁶ Munkacsí, *op. cit.*, p. 91, c. by Janko, *op. cit.*, p. 172.

³⁷ Manninen, *op. cit.*, p. 320.

³⁸ Manninen, *op. cit.*, p. 380.

³⁹ Janko, *op. cit.*, p. 578.

dashed to death, or (b) a slipper trap where also the fish is killed, or (c) a net sack trap in which the fish is caught living. The opening is always where the current is the strongest, for it is essential that there be a strong flow for the device to be successful.⁴⁰ The second form is the Magyar weir, which is constructed with poles driven along the river-bed from one shore to another, a strong grill stretched across; in the middle there is an opening leading to a net trap.⁴¹ Some other forms of fish fences are also mentioned.⁴²

On linguistic grounds we know that weirs and dams were known to the proto-Finno-Ugrians when all the peoples of this stock lived together before their separation. Some of the words of Finno-Ugrian origin denoting *weir* are: Finn. *otava*, "rete salmonibus capiendis;" Lapp. *oaces*, *oaccas*, "rete trans flumen positum ad exitum piscibus intercludendum;" Syr. *vodz*, *vodz*, "eine Reihe Pfosten quer durch den Fluss (zum Anhängen der Netze);" Vog. **ūsēm*, etc., "Reuse," *ūsīm*, "Zaun;" Ost. *ūsym*, *vōsym*, "eine Art Fischreuse welche die Russen *vazan* nennen;" ?Magy. *vejész*, *vejsze*, etc., "das Rohrwehr beim Fischen," etc.⁴³ And

⁴⁰ Herman, *op. cit.*, pp. 83, 151; Janko, *op. cit.*, pp. 161 sq.; Sirelius, *op. cit.*, p. 116 sq.

⁴¹ Herman, *op. cit.*, pp. 83, 152; Janko, *op. cit.*, p. 162; Sirelius *op. cit.*, p. 117.

⁴² Herman, *op. cit.*, pp. 156, 157; Janko, *op. cit.*, pp. 51-53; Sirelius, *op. cit.*, pp. 119-120.

⁴³ E. Setälä, "Zur finnisch-ugrischen Lautlehre," "*Finnisch-Ugrische Forschungen*," ii (Helsinki, 1902), p. 221; Sirelius, *op. cit.*, p. 428.

von Hevesy⁴⁴ questions if the Magyar word *vejsze* may not be identified with the Santali *baisau*, "fix, put down, fasten, settle, establish." Another FU word denoting "weir" is Finn. *pato*; Lapp. *biioŝŝo*, "fish weir;" Ost. *pat* *p"n'l*, "a kind of fish weir;" Magy. *fal*, "wal."⁴⁵

Among the Ob-Ugrians, fishing traps have been mentioned from time immemorial: and are still in use. They have been mentioned by the Ostyak name *pon*, as also by the Vogul (?) name *gimga*.⁴⁶ Ahlqvist⁴⁷ says that the Ostyaks use all kinds of fishing implements from quite small traps to immense drag-nets.

Various forms of traps are used in conjunction with these weirs and dams. In making the traps the mouth of the trap is made first, and then the body itself. The shape of the body is held together by means of cross bindings, which may be either hoops or in one continuous spiral form. As a general rule small Ob-Ugrian traps are with hoop binding, and the larger ones with a spiral binding. This difference in the technique is of very great ethnological importance as we shall see presently.

⁴⁴ Von Hevesy, *op.*, pp. 135 *sq.*

⁴⁵ Manninen, *op. cit.*, p. 336; Setala, in *Nyelvtudományi Közlemények*, xxvi, p. 382, cited by Sirelius, *op. cit.*, pp. 428 *sq.*

⁴⁶ Patkannoff, *Die Irtysch-Ostj.*, p. 26. The Vogul name, as given by Sirelius (*op. cit.*, p. 102), is *kamka*; *gimga* is the Syryanian name (Sirelius *op. cit.*, pp. 124, 125, 135). The identity of the two words is evident. See J. Szinnyei, *Finnisch-ugrische Sprachwissenschaft* [Samm. Goschen], p. 21, for FU **k* ~ Vog. *k*, *f* ~ Syr. *k*. *g*.

⁴⁷ Ahlqvist, *op. cit.*, p. 54.

One form of Ob-Ugrian fishing trap which deserves our special attention is the so-called trumpet trap. This trap has a rectangular or round mouth opening and a long narrow body. The trap is placed at the opening of a weir or dam. The force of the current causes the fish to go into it, and, once there, it cannot turn round any more and escape. This trap too is made with the spiral binding, and is used both by the Ostyak and the Vogul,⁴⁸ Pl I, *a*; Pl. II, *b*.

The trumpet trap is known among all Finno-Ugrian peoples who practise fishing to any extent, except the Lapps;⁴⁹ and it belongs to one of the most primitive forms of fishing implements.⁵⁰ Our authorities are agreed that although there is no definite proof that the trumpet trap is an original Finno-Ugrian implement, yet the facts that it has a very widespread use in Siberia, and that it is known among all Finno-Ugrian peoples make it highly probable that this particular implement was known to their forefathers while they still lived together.⁵¹ In Europe trumpet traps are known⁵² in the departments of Aude⁵³ and Corrèze⁵⁴ in

⁴⁸ Cf. Sirelius, *op. cit.*, pp. 12 *sqq.*

⁴⁹ Manninen, *op. cit.*, p. 338; Sirelius, *op. cit.*, p. 389.

⁵⁰ Sirelius, *op. cit.*, p. 389; *Id.*, *L'origine des Finnois*, p. 60, and Fig. 40 on p. 44.

⁵¹ Cf. Sirelius, *Über die Sperrfischerei*, p. 389.

⁵² All the references given in square brackets are taken from Sirelius, *op. cit.*, pp. 384-386.

⁵³ [M. L. Daubree and M. R. de Drauin de Bouville, *Pêche fluviale en France*, (Paris, 1900), p. 65].

⁵⁴ Daubree-Drouin de Bouville, *op. cit.*, p. 210.

France, in England,⁵⁵ in Sweden where it is called *styrta*,⁵⁶ and in Russia.⁵⁷ In America, the Pomo Indians of California have a long-necked basketry trap which is laid in the current; it prevents the fish from backing out, and the trap is too narrow for the fish to turn. The cross-binding of the trap, as the illustration shows, is spiral.⁵⁸ In Asia the same trap is known in Tobolsk, Siberia,⁵⁹ in Siam where it is called *chut*,⁶⁰ in Sumatra where it is called *sana* and has the exact form of some Ostyak specimens,⁶¹ and in India. One Indian form, called *bassek*, Pl. I, b, has a long conical shape and is held together with a spiral binding.⁶² Another Indian specimen is from the Godāvāri; it is also conical

⁵⁵ [A. Metzger, *Süsswasserfischerei. Amtliche Berichte über die intern. Fischerei-Ausstellung in Berlin 1880* (Berlin 1881), p. 74.]

⁵⁶ [N. Gislér, "Ron om Laxens natur och fiskande i de Norrlandska Älverne," *Svenska Vetenskaps Akademiens Handlingar*, 1752, pp. 18, 22].

⁵⁷ [*Katalog mezdunarodnoi rybopromyslennoi vystavki 1902 g. v S-Peterburgye* (15 Yanvaryā—24 Febraya) (St Petersburg, 1902), p. 68.]

⁵⁸ A. L. Kroeber, *Handbook of the Indians of California* (BAE-B 78), Pl. 33, a, facing p. 173; cf. Bonnerjea, "California Indian Fishing Methods." *The Salmon and Trout Magazine*, No. 87, June 1937, p. 131.

⁵⁹ [Patkanoff, *Mat.*, i. 255.]

⁶⁰ [*Katal. mezd.*, p. 119, No. 42.]

⁶¹ Berlin, Museum für Volkerkunde, I c 10342.

⁶² Berlin, Museum für Volkerkunde, I c 27807. Cf. Sirelius (*op. cit.*, p. 386) where it is said that it "*bietet der Form eines langgestreckten Kugels und ist mit spiralformig gewundenen Bandholz geflochten.*"

in shape; but as far as can be seen from the illustration, the cross-binding is not spiral, but with hoops,⁶³ Pl. I, c. Similarly the *londrā* of the Khārīās, a Mūṇḍā people, is described as a "self-acting trap made of...bamboo strips, and is of.. conical shape...It is very long but narrow, being 4 inches at the mouth: and the other end is not stitched but the free ends meet together. It is placed at the mouth of an opening in the ridge of a paddy field through which the water flows out. The small fishes that enter it cannot move backwards, as it is very narrow and the free end is tied with a rope. Fish caught in the trap is taken out by unfastening the rope or overturning the trap."⁶⁴ From the illustration given by the authors⁶⁵ it appears to have a hoop binding and not a spiral.

The basketry trap is known among all fishing peoples of the world; and therefore its prevalence among a certain group of people is of little ethnological value. As Jankó⁶⁶ justly remarks, traps are essentially the same everywhere, no matter whether they are made of reeds, bamboo or palm leaves. The form too is of slight importance; but the ethnological value lies in those parts of the trap which are not indispensable for its function of trapping fish; in other words, those parts which, if removed, would still not impair its

⁶³ Francis Day, *Indian Fish and Fishing* (London, 1883), Pl. I, II.

⁶⁴ S. C. Roy and R. C. Roy, *The Khārīās* (Ranchi, 1937), i. 105.

⁶⁵ S. C. Roy and R. C. Roy, *op. cit.*, Pl. VIII (facing p. 104.)

⁶⁶ Jankó, *op. cit.*, p. 193.

utility as a trap, such as the cross-binding. Coming back to the spiral-binding technique, we find that neither Magyar nor Finnish traps possess it, although the Ostyak and the Vogul traps invariably use it. The same is also true of their neighbours the Samoyeds in Siberia. After leaving the Samoyeds we have a long way to travel before we meet with the same spiral-binding technique again in India and Oceania⁶⁷ and in California.⁶⁸ The similarities between the Ob-Ugrian and the Indian traps do not end with the shape and binding, but extend further. Even Sirelius noticed it and wrote: *Sie [the similarities] beziehen sich auch auf die Art des Material selbst. Denn ebenso wie die ost jakish-wogulischen (wie auch die jakutischen, Jenise-ostjakischen und samo-jedischen) Reusen werden auch die indischen Reusen fast regelmässig aus Spleissen, freilich nicht Nadelholz,- sondern Bambusspleissen, gefertigt.*⁶⁹ He then justly argues that it could hardly be conjectured that the Ostyaks and the Voguls discovered the spiral-binding technique for themselves and then spread the technique over the whole vast territory of the Samoyeds. Neither is he inclined to believe without further evidence that the technique originated in India, and was borrowed

⁶⁷ Cf. Berlin, *Museum für Volkerkunde*, I c 10331, VI 16793; Copenhagen, National Museum, D. c. 56793; Stockholm, Riksmuseum, E. N. 378, R. M. 4013, 4014, 4021, all cited Sirelius, *op. cit.*, p. 413.

⁶⁸ See Pomo long-necked trap described above.

⁶⁹ Sirelius, *op. cit.*, p. 413.

from there by the Ostyaks and Voguls, because the distance separating the Ob-Ugrians from India is too great. The recent researches of von Hevesy⁷⁰ have made it quite clear that the Mūṇḍās and the proto-Finno-Ugrians must have come into contact with each other, and therefore it seems reasonable to suppose that the spiral-binding technique originated in India, and from there spread in two general directions; one towards the east to Sumatra, Java, Siam, and so on; and the other to the northwest and northeast among the Ugrians and their neighbours. Heine-Geldern in various studies has already shown that such connections between India and the countries lying to the east of her are not only probable but almost a certainty. And we know that the Samoyeds are linguistically—if not culturally—related to the Ugrians.⁷¹ From a consideration of the points mentioned at the beginning of this paragraph Jankó comes to the conclusion that Magyar fish traps are chiefly of Russian origin.⁷² In this connection it may further be remarked that Sirelius finds another analogy with some fishing traps from Bengal. About them he says:

⁷⁰ A summary and a fair bibliography are given in Bonnerjea, "A Munda nyelvekrol," *Magyar Nyelvtör.* lxiv (Budapest, 1935), pp. 99-102, 124-130; *Id.*, *Traces of Ugrian Occupation*, pp. 621-632.

⁷¹ Setälä, *Zur Frage der Verwandtschaft der finno-ugrischen und samojedischen Sprachen*, "*Suomalais Ugrilaisen Seuran Aikakauskirja*" [*Journal de la Société Finno-Ougrienne*], xxx (Helsinki, 1918), Fasc. 5.

⁷² Janko, *op. cit.*, p. 202.

"Überdachte Fischzaunformen, die eigentlich schon für Reusen zu gelten haben, sind auch in Bengalen zu finden. So wird dei in Fig. 517 abgebildete, deren Name khora ist, gebraucht 'auf bewässerten Feldern, um in Kanälen, wo keine Strömung vorhanden ist, junge Fische zu fangen.' Eine zweite Bengalische Form, die den Namen dhaur trägt, geben wir in Fig. 518 wieder."⁷³ These traps do not seem to bear any resemblance to the specifically Ugrian traps, and could have analogies in any part of the world and among all peoples.

A modified form of the trumpet trap is found among the Magyars. It is known as the *bocskor-varsa* or the "slipper trap." It is a peculiar form of a trap which can be used only in conjunction with a weir, and never alone. It is made of reeds of about the thickness of a finger, and in shape resembles an Eastern slipper with a turned-up toe (Pers. *pāpūzh*). It is a common object in the stone dams of the Szekely district. The fish is dashed against the narrow sides of this trap by the force of the current, and is killed.⁷⁴ Pl. II, a.

The same trap is found among the Ostyaks and the Voguls.⁷⁵ In weir-fishing it is the only one of Finno-Ugrian origin, and of it Jankò says:

⁷³ Sirelius, *op. cit.*, p. 306, and Figs. 517, 518, citing Day, *Indian Fish and Fishing* Pl. I, 5, 7.

⁷⁴ Herman, *op. cit.*, pp. 231, 232; Jankò, *op. cit.*, pp. 178, 179; Sirelius, *op. cit.*, pp. 113 sq.

⁷⁵ Jankò, *op. cit.*, p. 178; Manninen, *op. cit.*, p. 381.

"From all this it is clear that the slipper trap possesses an ethnological importance, and on account of an exact analogy seems to be of Ugrian origin; because traps without necks are found only among the Magyars, Ostyaks and Voguls."⁷⁶ He also states that this type of trap is unknown among the Russians and the Turks of the Ob and Irtyz districts. On the other hand, Sirelius, who made an intensive study of Finno-Ugrian fishing methods, is of opinion that the "Hungarian slipper trap, Fig. 191,"⁷⁷ is like the Finnish trumpet trap, Fig. 224, most probably a local form."⁷⁸ Traps of this form seem neither to be in use among the Mūṇḍā peoples of India nor among any other peoples of the same country; but the shape itself—an almost exact representation of the Indian *nāgrā* (showing Muhammedan influence)—is so suggestive that it appears that further research on the subject may be fruitful.

Another Ob-Ugrian implement used in conjunction with weir-fishing is a net-bag on a rectangular frame, called *vōsym* (Russian name *vazan*), etc., Pl. III, α. It takes the place of the long-necked trumpet trap, and is placed at the opening of the weir. It has several lines at the bot-

⁷⁶ Janko, *op. cit.*, p. 183; *Aus all den ist offenbar, dass...die Babuschenreuse ethnische Bedeutung besitzt und scheint diese auf Grund einer genauen Analogie ugrischer Ursprung zu sein, indem Reusen ohne Hählen einzig bei den Magyaren, Ostjaken und Wogulen bekannt sind.*"

⁷⁷ Fig. 191 on p. 123 is a Syryanian trumpet trap; it is evidently a misprint for "Fig. 171" on p. 114, which depicts a Magyar slipper trap.

⁷⁸ Sirelius, *op. cit.*, p. 463.

tom. The fisherman holds the lines in his hand, and by the tension on them feels if a fish has been entrapped in it. At spawning time the Ob-Ugrians on the Ob and the Irtys catch many valuable kinds of fish with this net trap. Sirelius⁷⁹ describes it as follows: "*Das wazan ist ein Netzwerksack, der mit Mündungs- und Hebstange, Holzringen und Fühlleinen versehen ist. Der erstgenannte Teil wird an den unteren Rand der Sackmündung festgebunden, und auf seine beiden Enden wird ein halbkreisförmiger Bogen aus Faulbeerbaum aufgesetzt. Die Hebstange wird durch in seinem Ende befindlichen Löcher in der Mitte der Mündungsstange angeschnürt. Die Ringe, die aus Faulbeerbaum oder Weide bestehen, werden an den vertikalen Mündungsrändern des Sackes angebracht. An den Fühlleinen merkt der Fischer wenn sie zu zucken beginnen, das ein Fisch in das wazan gekommen ist. Sie werden zu einer oder zu mehreren an den verschiedenen Stellen angebunden. Der Sack selbst wird beim Einsenken ins Wasser an den an den Enden der Mündungsstange befindlichen Bögen und den mit den Mündungsrändern verknüpften Ringen befestigt, indem diese wie jene um die in den Boden geschlagenen Pfeiler gelegt werden.*"

Manninen⁸⁰ says that the *vösym* has its parallel in Finland and Esthonia; but Sirelius⁸¹ states that the only Finno-Ugrian peoples who use it are the

⁷⁹ Sirelius, *op. cit.*, p. 15.

⁸⁰ Manninen, *op. cit.*, p. 338 and Fig. 234 on p. 339.

⁸¹ Sirelius, *op. cit.*, p. 392; cf. p. 432.

Ostyaks, Voguls and the Esthonians ; and he does not mention the Finns. Among the other peoples using this particular type of net are the Samoyeds,⁸² in Russia,⁸³ in the Caucasus,⁸⁴ among the Gilyaks of the Amur delta,⁸⁵ in Celebes,⁸⁶ and in Bengal in the district of Banka (?) where it is called *tangkul*. In the Berlin Ethnographical Museum⁸⁷ there is a model of specimen from Bengal. Sirelius gives an illustration of this model,—given here in Pl. III, b.—, and describes it by saying that in Bengal “*Werden an die Enden der Mündungsstange des vazan (tangkul) Hebstangen gebunden, an denen je ein um die Pfeiler gelegter Rutenring angebracht ist, und die Strippen am oberen Rande der Mündung werden an die Enden der auf die Fischerbank gestellten wagerechten Stangen des Fangerüsts gebunden ; ausserdem ist eine Fühlleine vorhanden, die aussen am Sterz des Sackes festgebunden wird.*”⁸⁸ The description of the Bengal specimen as also the illustration are almost identical with those of the Ugrian peoples, and there can be no doubt as to the identity of the two. Sirelius futher says that four types of the *vazan* are to be considered when setting it or taking it up. Of these the first type is found among the Ostyaks, Voguls and the Samoyeds,

⁸² Tret jakoff, p. 262, cited by Sirelius, *op. cit.*, p. 393.

⁸³ Cf. S. G. Gmelin, *Reise durch Russland* (St. Petersburg, 1774)

⁸⁴ Kuznecoff, *Tersk.*, pp. 64, cited by Sirelius, *op. cit.*, p. 394.

⁸⁵ Sirelius, *op. cit.*, pp. 394 *sq.*

⁸⁶ Berlin, Museum für Volkerkunde, I c 27832.

⁸⁷ Berlin, Museum für Volkerkunde, I c 10384.

⁸⁸ Sirelius, *op. cit.*, p. 394, and Fig. 569.

as also at Terek; in it there is one pole attached to the middle of the pole at the opening for taking it out; the second type, found among the Samoyeds and in Bengal, has two poles one at each end of the opening pole; the other two types are found around Orenburg and on the Don.⁸⁹

Spearing fish by the torchlight is still in use among the Voguls. In a three-pronged Vogul fork the two outside prongs have the barbs turned towards the inside; the middle prong is longer than the other two, and is likewise fitted with a barb.⁹⁰ Manninen too says⁹¹ that the Vogul fish-fork has three prongs, each of which is separately attached to the shaft. Such a description could apply very well to the fork described by Jankó, but we are unable to say if *all* the Vogul forks are of the same type. Fish-forks, according to Jankó, do not seem to occur among the Ostyak; but Oglobin figures a three-pronged fork of the Yennissel Ostyaks from the year 1686, and Jankó imagines that he can see barbs, "Widerhaken," in Oglobin's drawing.⁹² This trident is given under a list of 102 property signs,

⁸⁹ Sirelius, *op. cit.*, p. 399.

⁹⁰ Janko *op. cit.*, pp. 491 sq. On p. 491, under the picture, this fork is described in the German text as an "Ostyak fork."

⁹¹ Manninen, *op. cit.*, p. 340.

⁹² Janko, *op. cit.*, p. 492. In the drawing given by Janko [I have not seen Oglobin's work] there is no trace of a barb. Neither can I see why it should be taken as a fish-spear; it might have been simply a tridentate staff or even a spear. See K. G. Lindblom, *Spear and Staff with Two or More Points* (Stockholm, 1937) for many of these staffs.

tangha. Of the fish-forks of the Xennisel Ost-yaks, Krause⁹³ says that they are not only three-pronged, but also such in which the barbs of the outer arms are not on the same plane with the barb on the middle prong. Two of these forks are in the Ethnographical Museum in Berlin.⁹⁴ While spearing fish by torchlight the Sosva Voguls use a birch-bark torch which they push in a cleft stick set upright at the bow of the boat. In order not to be dazzled by the light of the torch, the man wielding the fish-fork wears a large projecting "cap," "*Riadenachirm*," on his head. Two and more pronged fish-forks are also used by the Magyars. Of the two-pronged Magyar forks Manninen says that they were brought from Eastern Russia;⁹⁵ but Jankó is of opinion that "*Zweizackige Fischgabel ist türkischer Abstammung*."⁹⁶

Bidentate, tridentate and multi-pronged fish-forks are known among practically all fishing peoples, but until we have better descriptions of these implements in India it would be rash to draw any inferences.

Before leaving the subject of fishing in more or less restricted waters we may mention the plunged-basket, Pl. I, d. It is described as a bottomless, conical basket with an opening at the top. It is used by fishermen "wading in shallow

⁹³ Krause, *op. cit.*, p. 44.

⁹⁴ Berlin, Museum für Volkerkunde, LAC 3093, 3094.

⁹⁵ Manninen, *op. cit.*, p. 90.

⁹⁶ Manninen, *op. cit.*, p. 380.

water near the shore, in river, lakes, lagoons and other more restricted bodies of water. Here it is suddenly jabbed down over the fish, whereupon the entrapped catch is fetched up by inserting the arm through the hole at the top. The water should perferably be not more than knee-deep, as otherwise it is difficult to slam down the basket as well as to recover the fish."⁹⁸ To this Herman's description adds some more details. He says⁹⁹ that after the spring floods little bodies of water are left in various places, and it is there that the plunge-basket is used. It is known among the Magyars, and in the district around Szeged a developed form of it, made of netting, is in use.

Inspite of Herman's statement that the plunge-basket is met with everywhere, Jankó definitely denies it. He says¹⁰⁰ that the plunge-basket "is to be found neither in Finno-Ugrian nor in Turco-Tatar fishing, and is not even general among the the Russians; hence Sahanyeyeff regards it really as a White Russian implement." A little further down he shows that the Russian *cecna* is identical in form with the plunge-basket; its function, however, is not to catch fish, but to keep them imprisoned after they are caught. Hence he argues that the *cecna* is not a plunge-basket. Baskets with covers are used only by the Magyars.¹⁰¹

⁹⁷ Janko, *op. cit.*, p. 578.

⁹⁸ T. Leth and K. G. Lindblom, *Two Kinds of Fishing Implements* [Statens Etnografiska Museum. Smarre Meddelanden, Nr 11. Stockholm, 1933], p. 3.

⁹⁹ Herman, *op. cit.*, p. 334.

¹⁰⁰ Janko *op. cit.*, p. 462.

¹⁰¹ Manninen, *op. cit.*, p. 381.

The plunge-basket is met with among various other peoples, and we have evidence of its sporadic occurrence in Europe, Asia, North and South America and almost everywhere in Africa.¹⁰² What interests us most is its occurrence among the Muṇḍā peoples. The *mucu* of the Khārīās is a "Fishing trap made of bamboo strips stitched together with rope in such a way as to form a conical cage with a diameter of about 6 inches at the apex and 1½ feet at the bottom. Bark rope is lashed round strong bamboo strips at the bottom, top and three or four intermediate positions to hold the trap in position [in other words, hoop-pattern cross-binding]. It is held with both hands at the apex, and placed over fish in shallow water. Then the man inserts his hand through the apex and catches [or, rather, takes out,] the fish."¹⁰³ Von Hevesy¹⁰⁴ gives the same word as a Santali word, and his descriptive text leaves no doubt as to its being a plunge-basket. He connects the word *mucu* with the Cher. *maca*, "Fischreuse" and the Vot. *mucko* "geflochtener Bastkorb, Mühltrichter," but does not seem to know of the Russian word *mocka* used by the Finnish peoples around the White Sea to designate a net trap for small fish.¹⁰⁵

¹⁰² Leth and Lindblom, *op. cit.*, pp. 20-27 and Fig. 9 on p. 19. Cf. Krause, *op. cit.*, p. 128.

¹⁰³ S. C. Roy and R. C. Roy, *op. cit.*, p. 105, and Pl. VIII.

¹⁰⁴ Von Hevesy, *op. cit.*, pp. 245 sq., s.v. "*mucu*."

¹⁰⁵ Sirelius, *op. cit.*, p. 329.

The net-fishing of the Ob-Ugrians is done principally with set nets. The Voguls of Tserdynsk have a bag-net called *syryp* which corresponds etymologically¹⁰⁶ as also typologically with the Finn. *suurja*. It is described as a large net bag, drawn along either by two boats or from the opposite sides in the direction of the current. It has long, narrow poles attached to the under part of the bag, and strings to the corners of the top part.¹⁰⁷ In winter the Ostyaks caught fish by making holes in the ice,¹⁰⁸ but it is not clear from the text if nets were lowered through these holes or what method of fishing was employed. Herman and Jankó have devoted considerable space in their works to Magyar net-fishing, and therefore only a few special forms will be noted in this connection. The "Gaddernetz" is used for catching sterlets and other small fish. For driving the fish into the nets, clubs, "Trampe" with hollow heads, of a Slav pattern, were used.¹⁰⁹ Drag-nets were used not only in summer but also in winter for use under the ice. In net-fishing only one form, the bag net, is of Magyar origin;

¹⁰⁶ Sirelius, *op. cit.*, p. 400; *Id.*, "Kappale suomensukuisten kansain kalastushistorian," *Suomalais-Ugrilaisen Seuran Aikakauskirja Journal de la Societe Finno-Ougrienne*, xxiii (Helsinki, 1905).

¹⁰⁷ Manninen, *op. cit.*, pp. 338 sq.

¹⁰⁸ A. Zolotarev, "The Ancient Culture of North Asia," *American Anthropologist*, ns., xl (Menasha, 1938), p. 21, citing V. Arefiev, in *Sibirski Krasnoye Geograficheskoye Obozretse*, 1863, p. 55, and A. Dunin-Gorkavich, *The North of Tobolsk* [in Russian] (St. Petersburg, 1. 142).

¹⁰⁹ Manninen, *op. cit.*, p. 381.

all the others are borrowed. The *mét*-net too is a Finno-Ugrian original; it is found among the Magyars and Ostyaks and is unknown among the Germans.

The casting net of the Magyars of Transylvania is interesting from an ethnological point of view. The Magyar names for it are *rokolyaháló*, 'skirt net,' used by the Szekely people, and *pendelyháló*, "petticoat net," used by the people living between the Danube and the Tisza; the term *vetőháló*, "casting net," is seldom used. It is a circular net weighted down at the edges and having a string attached to the centre. In casting it, a rotating movement is imparted to it which causes the net to open out before it touches the surface of the water. Almost immediately the weights pull down the edges, and it shuts up like an umbrella. Any fish which happens to be in its path is entangled within its meshes.

The ethnographical distribution of the casting net is very widespread. It is known all over India; the Muṇḍās too use the net, but among one group, the Khārīās, its introduction is "of recent date."¹¹⁰ It is met with in Further India, the Moluccas, Celebes, and the island of Ambon; in Sumatra it is known as *djala* (cf. *Skt. jāla* *Magy. gyalom*), and its use extends as far as China.¹¹¹ It may be seen in an almost unbroken line from China, through India, Persia, Egypt, Greece, Italy, Hungary, Germany and France to

¹¹⁰ S. C. Roy and R. C. Roy, *op. cit.*, p. 106.

¹¹¹ Janko *op. cit.*, p. 456.

England.¹¹² Recently its prevalence has been shown in the province of Scania in Sweden,¹¹³ and it is used in Africa.¹¹⁴ On the other hand the Magyars are the only Finno-Ugrian people who use this type of net,¹¹⁵ and therefore it is regarded as a borrowed element in their fishing culture. It is unknown among the Turks.

Angling or hook-fishing, not as a sport but as a means of subsistence, is known among practically all peoples of the world, and fish-hooks may be regarded as one of the earliest types of fish-weapon.¹¹⁶ Among the Ob-Ugrians not only iron fish-hooks are used but also hooks made of wood or bone. Several wooden hooks are in the Berlin Ethnographical Museum;¹¹⁷ other Ostyak wooden hooks of the Jankó collection are to be seen in the Ethnographical Museum in Budapest. The *panne-jux* hook of the Ostyaks corresponds typologically to the Finnish wooden hooks, and is itself made of wood. Jankó says¹¹⁸ that he found many of these hooks, in use in the Great Mugan Valley, and cites other observers, such as Sirelius and Varpakhovski, in support of the fact that wooden hooks are in common use among the Ost-

¹¹² Janko *op. cit.*, p. 459.

¹¹³ I. Arvidsson, "Ett skaonskt kastnat," *Rig*, Stockholm, 1930, p. 29175.

¹¹⁴ Huth and Hindham, *op. cit.*, pp. 28-48.

¹¹⁵ *op. cit.*, p. 464; Manninen, *op. cit.*, p. 381.

¹¹⁶ See Bannerjee, "The Earliest Type of fish Weapon," *The Fishing Gazette*, cxil. (London, 1934), pp. 35, 159.

¹¹⁷ Berlin, Museum für Völkerkunde, I A 235, vol. Gell. Minsh.

¹¹⁸ Janko, *op. cit.*, p. 509.

yaks. As a precaution against the sharp teeth of the larger fish the hook often has a leather-covering on the shaft. The Voguls still make use of the primitive gorge,¹¹⁹ which is simply a piece of wood sharpened at the ends and tied to the line by the middle. The whole is inserted in the bait; and attempts to swim away the tension on the line causes the gorge to turn across and pierce the sides of the stomach or of the jaw. Although not belonging to the Finno-Ugrian stock, but since they come within the geographical boundaries of Hungary, we may mention that the "gipsies of Hungary use till today a very primitive form of a fish-hook. In the ponds of Mozőseg this hook takes the form of a rose thorn, about 3½ cm. long; the thorn is tied under the belly of a small fish, and the fish is allowed to swim about; bigger fish swallowing the little one are caught on this hook."¹²⁰

An extremely interesting form of hook-fishing is found among the Ostyaks. This is known as the *luma*, Pl II, d. Sostakovic¹²¹ describes the *luma* in the following terms: "The *luma* is a

¹¹⁹ Manninen, *op. cit.*, p. 339. The form of the gorge is exactly similar to the one I found among the Cheyenne Indians of Oklahoma (Bonnerjea, "Reminiscences of a Cheyenne Indian," *Journal de la Société des Americanistes*, ns., xxvii [Paris, 1935], p. 133; *Id.*, "Fish-hooks in North America and their Distribution," *Journal of the Indian Anthropological Institute*, i, Fasc. 1 [In Press].

¹²⁰ Bonnerjea, "Abnormal Specimens of Fish-hooks," *Notes and Queries*, clxxiv (London, 1938), p. 423.

¹²¹ Quoted by Janko, *op. cit.*, p. 508.

long line made of wood fibres, at the end of which there is a wooden hook; at the other end floats a block of wood. Small fish are attached to the hook [as bait], and then the whole contrivance is thrown into water. The kike, the usual holocaust of the *luma*, swallows the fish, and along with it the hook, and pulls about on the block of wood for so long a time till it either dies or is taken by the fisherman." Jankó "corrects" this statement by saying that the block of wood is not thrown into the water, but is left on the land with the line supported on a cleft stick in such a way that the least tug causes the block of wood to fall in the water. The Magyars too have an angling method which is essentially the same as the Ostyak *luma*. The Magyar name of this device is *láböhorong*, Pl. II, c. In this method of fishing a stake is tied with a thin string, a gourd or calabash floating in the water; from the float a strong line goes down into water, at the end of which there is a fish-hook. The line is set at night and examined in the morning. If a fish takes the bait and pulls on the thin string holding the calabash to the stake, the string snaps. Once free, the fish swims away dragging the calabash float along with it. The fish soon realises that the pain of the hook cutting into the flesh is lessened by allowing the calabash to float on the surface instead of trying to pull it down under the water. Its struggles gradually weaken it, and it succumbs in the end. The differences between the Ostyak and the Magyar hooks are that

in *luma* a block of wood is used as a float, in *lábòhorog*, a calabash; the line of the *luma* is placed, according to Jankó, on a cleft stick and the float itself is left on land, in the *lábòhorog* the float is already in the water; otherwise the two methods are the same.¹²² The *lábòhorog* is undoubtedly the same as the *tökòshorog*, "fish-hook with a ball," described by Viski.¹²³

The ethnological importance of the *lábòhorog* lies in the fact that Jankó in his classical monograph on fishing implements examined those of the Magyars and of many other peoples, but did not find any analogy elsewhere than among the Ostyaks, and therefore came to the conclusion that the angling device described for the *lábòhorog-luma* dates from the time when the Magyars and the Ob-Ugrians lived together, and is of Ugrian origin. Many years ago, as a young boy, the present author noticed fish-hooks attached to pieces of bamboo floating freely in the water, Pl, II, e. This was seen around Madhupur where there were many Santāli labourers, and the lines were presum-

¹²² Janko, *op. cit.*, p. 511. Figs. 492, 493 illustrate how the lines are set.

¹²³ See Bonerjea, *Abnormal Specimens*, p. 423. I submitted my suggestion to Mr. R. L. Marston, Editor of *The Fishing Gazette*, for his criticism. In his reply (dated London, 31st March 1938) he writes: "The method of capturing fish by means of a line attached to a float of some description is widely practised and dates back far beyond Izaak Walton's time." I cannot find any description in the ethnographical literature which would fit in with the *luma-lábòhorog*, and can only say that either Mr. Marston is wrong or that ethnographers have been lax in their observation.

ably set by them. The next time the same device was seen near Cuttuck, in the neighbourhood where the Juāngs are still to be found. Both the Santāls and the Juāngs are Mūṇḍā peoples, and therefore if my recollection is correct, the same device is met with among the Mūṇḍā peoples. As, however, no notes were taken at the time and memory is not always reliable, this suggestion is made with great reserve. Accepting it as a working hypothesis, we find that the evolutionary process in this device is as follows: The most primitive form is where the block of wood or bamboo is already in the water as among the Ostyaks—according to Sostakovic—and the Mūṇḍās; the next step upwards is the Ostyak form found by Jankò; and the final development is among the Magyars. In Jankó's Ostyak form and in the Magyar form the fact that the block is in the water or that the thin string attaching the calabash to the stake is torn is in itself sufficient to show that a fish has taken the bait; the Mūṇḍā form does not show it. *En passant*, we may remark that Sostakovic's statement need not be regarded as wrong; he visited the Ostyaks many years before Jankó, and it may well be that they had modified their method in the meantime. The three methods then are not different, but merely steps in the ascending evolutionary ladder. And if it can be argued that it is of Ugrian origin, it would also be an ethnographical proof in support of the Mūṇḍā-Finno-Ugrian hypothesis.¹²⁴

¹²⁴ Krause, *op. cit.*, p. 68.

Shooting fish with bows and arrows seems to have been known among the Ostyaks. Krause¹²⁵ describes some of the arrow points used for this purpose, and states that a few of them are in the Berlin Ethnographical Museum.¹²⁶ Shooting fish is still practised among the Guiana Indians; some of the British Guiana stamps¹²⁷ show the method used. But a cultural connection between these two peoples need not be considered. The Tavda Vogulas use the word *pukör* to designate a fish-hook. The word is phonetically the same as *bagor*, a gaff hook; and it is not clear if *pukör* signifies a fish-hook or a gaff hook.¹²⁸ Only those Ostyaks who have come under Russian influence use the gaff hook which they make by tying on a strong Russian hook to a long pole; they use the word *bagor* to designate it. The gaff is probably Turkish in origin.

Before concluding this short sketch of Ugrian fishing a few words may be said about a peculiar Magyar implement called *kuttyagató*. It is a piece of wood with a flat sole, and is used for striking the surface of the water and producing a sound like the croaking of jumping frogs.¹²⁹ It is emp-

¹²⁵ Berlin, Museum für¹ Völkerkunde, I A 206, Coll. Finsch; I A 3083 g, etc.; I A 205, Coll. Finsch [three-pronged].

¹²⁶ 1931, 1934. *Michel Briefmarken-Katalog*, British Guiana, Nos. 152, 175.

¹²⁷ Munkacsy, *op. cit.*, p. 94.

¹²⁸ Manninen, *op. cit.*, p. 381.

¹²⁹ K. Viski,² *Führer durch die Sammlungen der Abteilung des Ungarischen National-Museums* (³Budapest, n. d.), pp. 76. sq.: "An einem Ende der Schnur eine Angel, am anderem der Ball (ein ⁴Flaschen-kürbis). Der an die Angel geratene Fisch kann⁵ den Ball nicht unter Wasser zerren und dieser zeigt dem Fischer an der Oberfläche des Wassers an, wo sich der Fisch befindet (an Secn ⁷gebräuchlich)."⁶

loyed for catching *Silurus glanis*. During the summer flood the fisherman goes at night, takes his double hook weighted down with lead, baits it with a living frog, *Rana esculanta*, and lets it down where the fish are numerous. At the same time he strikes the water with *kuttyogatò* and produces the croaking noise. The sound entices the fish to come up to the surface, where it notices the frog and swallows it along with the hook. The *kuttyogatò* is unknown among the Finns, Voguls, Ostyaks and Syryänians, because *Silurus glanis* is not found in their territory. If other Finno-Ugrian peoples know it, it can only be the Mordvins, Cheremis and the Votyrk, the so-called Volga Ugrians. This implement is probably the same as the Greek *Κεῖλος*¹³⁰

An ethnographical study of the fishing implements of the Ugrian peoples shows marked similarities with Indian implements. The similarity is not always a superficial resemblance, but very often extends further, such as to the technique employed in their construction. Hornell in his study of the fishing methods of the Ganges shows that "all the methods employed there with the sole exception of the 'China net', now in use in Malabar and in parts of Bengal and Assam, are indigenous."¹³¹ The trumpet trap of the Ostyaks and Voguls has an exact analogy, both as to shape as well as

¹³⁰ Bonnerjea, "On the 'Horn of the Field Ox,' *Notes and Queries*, clxxiv (London, 1938), pp. 347 sq.

¹³¹ B. S. Guha, "Progress of Anthropology in India during the Past Twentyfive Years," *Progress of Science in India during the Past Twenty-five Years* (Calcutta, 1938), pp. 326 sq.

to technique, with Indian traps. The Ostyak *vosym* is essentially the same as an Indian net trap. In hook-fishing the Magyar *lábhorog* has an exact parallel in the Ostyak *luma* and in a Mūṇḍā float fishing device, although a similar mode of fishing is not found elsewhere. The casting net is met with in India, also the plunge-basket. The form of fences and dams has some striking resemblances with those of India. These various similarities may be explained in one of two ways: cultural diffusion and independent invention. Owing to the great distance separating the Ugriaius from India it seems more logical at first sight to explain the similarities by independent invention, but the resemblances are too minute in details for this to have taken place. And therefore the facts seem to point towards a prehistoric cultural connection between the Ugrians and the Mūṇḍā peoples of India. When and where they came in contact it is difficult to answer and will need more intensive research not only in fishing, but in their respective cultures as a whole, before we can answer these vital questions; but as a working hypothesis it seems reasonable to suppose that such a connection existed, and linguistics, as shown by de Hevesy, shows that such a hypothesis is tenable.

¹⁵² It is my pleasant duty to express my gratitude to Prof. A. Kanisto, President of the Finno-Ugrian Society of Helsingfors, for supplying me with works on Ugrian fishing; the late Dr. B. Munkácsi gave me some valuable linguistic data; Mr. S. C. Roy of Ranchi has kindly answered many of my questions relating to Munda ethnology; and last but not least, my friend Dr. Guillaume de Hevesy of Paris has for many years given me help, advice and encouragement in all my Finno-Ugrian studies.

On the whole, the fishing culture of the Finno Ugrian peoples has been excellently studied by such scholars as Herman, Jankò and Sirelius, but the Indian fishing implements have been sadly neglected in our available ethnological literature; their description is for the most part far too meagre, and the published illustrations are, if possible, even worse. The importance of fishing can hardly be overrated, especially if we take into consideration that fishing and hunting were two of the most important occupations of early man, and among the coastal, lacustrine and fluvial peoples fishing must have been the chief, if not the only, means of food supply. The quest for food has contributed much towards the cultural development of man. The Mūṇḍā peoples too were essentially fishers and hunters, and their culture too was a fishing and hunting culture. Therefore anthropology will be greatly profitted if field workers in India will bear this very important, though not so glamorous, fact in mind. As we all know, anthropology needs facts and more facts, and the younger generation in India can not only further the progress of science, but also serve their country best, by collecting these facts.

UGOR HALASZESZKOZOK ES EGYES INDIA HASONLOSAGAIK.

Az ugor halászati módszerekkel foglalkozó egyik ethnografiai tanulmány alapján meglepő hasonloságot lehetett felfedezni egyes ugor és indiai halászeszközök között. Es a hasonloság nemcsak az eszközök felületes formai megegyezéséből áll, hanem továbbmenően meglepo az eszközök konstrukciojának hasonló technikája. Janko és Sirelius arra a meggyozódásra jutottak, hogy az ugor halászati eszközök között igen sok van, mely men más néptől atvett forma, hanem ugor eredetű és Hörner a Gangeszen üzött halászat módszereiről irt tanulmányában arra az eredményre jut, hogy az ott alkalmazott eszközöktől egyedül a "*China net*", mely Malabar, továbbá Bengal és Assam egyes részeiben használatos, a többi mind eredeti. Ezen kutatásoktól eltekintve, azt találjuk, hogy az osztjások és vogulok trombitaformájú varsája, *pos*, pontosan megegyezik mind formájában, mind formájában, mind spiráltechnikájában egy indiai varsával, Pls. I, *a, b, c*, II, *d*. Az osztják *vösvm* kis részletektől eltekintve teljesen megfelel az indiai hálóvarsával, pl. III, *a, b*. A Magyar bocskorvarsa nagyon hasonló formájú az indiai papucsához, be ilyen formájú halászati eszköz Indiában ismeretlen. A horgászatnál használt Magyar lábóhorognak teljesen megfelel az osztják *luma* és a *munđa* uszoval ellátott egyik halászati eszköz, Pl. II, *c, d, e*, holott sehöl a világon hasonló halászati módszer men található, A kerek vatoháló Indiában is

megtalálható, de felfedezhető ennek tökéletes elterjedése Chinától Angliáig és Afrikában is. Ez a Magyar halászatban valószínűleg szintén más népektől átvett eszköz, annál is inkább, mivel a többi finn-ugor népeknél nem található. A "*Plunge basket*" ("*Stulpkorb*"), Pl. I, d, egy oly halászati eszköz, mely a régi és új világban elszórtan mindenütt felfedezhető, ezért ennek komolyabb ethnográfiai értéke nincsen. Ezzel szemben érdekes, hogy az ugor vejsze és czége meglepően hasonló a megfelelő indiai szerszámokhoz. Ezenkívül számos hasonlóság található az ugor és indiai halászati segédeszközökben.

Mindezen feltűnő hasonlatosságok csak kétféle módon magyarázhatók és pedig vagy kulturális átszivárgással vagy független felfedezésekkel. Tekintettel az említett népeket elválasztó nagy távolságra első pillanatra logikusabbnak látnak ezen hasonlatosságokat úgy magyarázni, hogy egymástól független felfedezések eredményei, de a hasonlóság sokszor annyira részletekbe menő, hogy ez a feltevés nem állhat meg. Ezért ezen tények inkább az ugor és indiai Műndá népek történelemelőtti kulturális kapcsolataira mutatnak. Ily feltevés első percre merésznek látszik, de Hevesy nyelvészeti kutatásai; a Mohendzszo-Dáro romjaiban talált csontvázrészai az *Equus Przjevalski*-nak; a műndák halotti szertartásainál a kis lovasfigurák használata, mely egy korábbi lovaskulturára mutat (mint ezt újabban Heine-Geldern kimutatta); a vogul és műndá teremtményi és egyéb mondák nagy hasonlósága; Guha, Bartucz és Eickstedt somatologiai kutatásai;

végül Menghin és Mlle. Colani -archeologiai munkái mind arra mutatnak, hogy egy ily feltevés nemcsak lehetséges, de valószínű is. Hogy hol és mikor kerülhettek az ugor és munda népek egymással érintkezésbe ez intenzív kutatás útján volna lehetséges, mely természetesen nemcsak a halászatra vonatkozna, hanem az egész kultúrára.

Ami magát a halászati kérdést illeti; az ugor népek halászati kultúrája alaposan tanulmányoztatott, amit nem állíthatunk az Indiairol. Peding a halászat fontosságát nem szabad szem elol tēvesztenünk, ha figyelembe vesszük, hogy a régi népeknél a vadászat két főfoglalkozás volt, sot a tenger-valamint toparti és folyementi népeknél a táplálék megszerzésének egyetlen forrása nyilván a halászat lehetett. Tudjuk, hogy épen a táplálékszerzés kényszerűsége nagyban hozzájárult az ember kulturális fejlődéséhez. A Munda népek is főleg halászok és vadászok. Ezért az antropológiának nagy hasznára leune, ha azok akik a helyszínen kutatnak, ezeket szem elott tartanak. Az antropológiának több és több tényre van szüksége és Magyarország-Finnország-és Indiában a fiatal generáció nemcsak a tudományt vinné előre ily tények kutatásával, hanem hazájának is szolgálatot tenne vele.

Dr. Bonnerjea Biren

Magy. Kir. Pázmány Péter Tudományegyetem,
Budapest.

THE BHILS OF THE GWALIOR STATE,

(Communicated by

*Sir Manubhai N. MEHTA, Kt., C.S.I., M.A., LL.B.,
(Home Minister Gwalior State).*

I. Strength and Distribution.

Among the aboriginal tribes found in the Gwalior State the Bhil group of tribes is by far the most considerable. It is also much the most compact and important.

The bare census totals do not as a rule exhibit the true strength of the Bhils. The reason is that in the census tables a number of tribes closely related to and indistinguishable from the Bhils are paraded under different labels as separate castes or tribes. Of these the Bhilala tribe, which is found exclusively in the Amjhera District, is the most numerous. This group, which owes its origin to some infusion of Rājput blood, has no caste frontiers at all; and in consequence, at each census, it receives large accretions from other tribes of the Bhil group. This accounts for the extraordinary increase of 45 per cent in its number at the last census. Amalgamating the figures for the Bhilala tribe with those of the Bhils the total strength of the Bhil group of tribes at the last census was shown as 1,25,026. Of these 78,000 were enumerated in the Amjhera District, 11,000 in Mandasaur, 9,000 in Shajapur, 8,000 in Esagarh and the remainder elsewhere. In the

latter three districts the Bhils are the Bhils of the plains, the survivors of that section of the race which stayed with the new Āryan settlers to serve them as agricultural serfs and watchers of the villages against the inroads of their wilder brethren or of wild beasts. Thus cut off from the parent stock in the dim centuries and steam-rollered by subsequent political convulsions and successive civilizations, the Bhils in the tracts have shed the more prominent of their racial traits and are now indistinguishable from the depressed Hindus living on the outskirts of the villages. To-day they stand as a class apart, utterly disowned and forgotten by their brethren of the hills. It is only the mountain fastness of our 'hermit' district of Amjhera that the true autochthonous stock is found. Here protected by natural obstacles and our generous policy of official toleration the true hundred per cent Bhil lives and thrives and continues to form the most fecund element of the population of the State. It is the purpose of this note to describe the Bhil in this tract.

II. *Origin and History.*

The origin and history of the Bhils is lost in the mists of antiquity. They have no written records and but few oral traditions. There is no doubt, however, that they represent a race which inhabited the peninsula of India earlier than the Āryans and the Dravidiāns. They belong to the pre-Dravidiān

stock which, perhaps succeeded an earlier Negritic people in the occupation of *Dakshina-vana* and were known to ancient Sanskrit authors only as monkeys and goblins. Equally certain it is that the Bhils, though they never became effective masters of the plains, have in the past maintained considerable influence in Malwa and Rajputanā. Of this we get a glimpse when we remember that the acknowledged head of Rajputs, in whose veins, it is claimed, flows the bluest blood in the world, cannot be established on his *Gadi* till he has received on his forehead the customary *tilak* or ceremonial mark of installation from the Bhil. This quaint custom points to the fact that in Rajputanā, at any rate, the Bhil was believed to be a more ancient lord of the soil than the direct descendant of Rama Chandra himself. Tradition has it that the tribe has immigrated from a western home, but no authentic account of the change of habitat is extant. Certain it is that the Bhil lay on the path of the conquering Āryans in their march towards Gujrāt and Mālwa. The impact of the Āryans must have caused the displacement of the Bhils along the Vindhya and into the Satpurās; but the movement was necessarily restricted because they were flanked by the presence of other tribes on those hills. During the 14th and 15th centuries or perhaps even earlier an immigration of the Rajput clans into the country of the Bhils took place. The Muhammadan invaders of Upper India were then pressing hard on the country between the Ganges and the Nerbada rivers occupied by the

Rajputs; and it was doubtless the recoil from them that forced the Rajput colonies southwards into the wilds of Central India. This meant another displacement of the Bhils along and into the interior of the Vindhya. Of this migration the Bhils still retain in their tribal memory a dim and incoherent outline.

Since the earliest times the Bhil has lived in a condition of war and raid. Even at the best of times he has known but sullen peace which which has bred in him the qualities of the wild animal. In every village and on every mountain-path the Bhils were the hereditary local police. In return for patrolling the village lands, destroying wild animals and escorting travellers through passes they claimed maintenance from the villagers. In times of plenty this was cheerfully given, but the wars and oppressions of that period and the exorbitant demands of officers and farmers reduced the actual cultivators of the soil to such distress that they were barely able to maintain themselves, much less those dependent on them. Deprived of the last of the means of their livelihood, the Bhils, as true hillmen, took to other native hills, formed themselves into gangs and turned their hands against the spoilers till the name of Bhil became synonymous with that of the hill-robber. So weak were the various governments of the time that instead of trying to reduce the Bhil gangs by force of arms they would endeavour to placate them by ransom and tribute not with the idea of inducing them to return to peaceful pursuits but in order to

encourage them to direct their plundering and marauding incursions into other peoples' territories. There is not a village in all the frontier between the hilly district of Amjhera and the plains where tales are not still related of the sudden down-swoop of the Bhils on the garnered harvests of the villagers, of bloodshed, torture, and rapine and of the sharp and savage retaliation of government mercenaries. Thus a people who had been the custodians of the peace became the bitterest foes of the people. The Bhil's hand was against every man and every man's hand was against him. This was the state of affairs when in 1858 the Amjhera district which is the stronghold of the Bhils in the Gwalior State came under the direct control of Scindia. Our earliest administrators were too fully occupied with affairs of the open country to have much time to spare for the Bhil and his wildernesses and thus we find that the interior of the Amjhera district remained an almost unexplored mystery up to the end of the last century.

III. *Caste and Tribal sub-divisions.*

Among themselves the Bhils are divided into a number of clans. Each clan holds as sacred a particular object which is regarded as the clan totem ; it being never destroyed or injured.

IV. *Domestic and Social Life.*

The Bhil family :—As a rule the Bhil family is a happy one. The parents are devoted each to the other and to their children of whom there are usually many.

On festive occasions the Bhils get hopelessly drunk. Sometimes they beat and drive away women. There occur many lapses of virtue but a certain broad-minded charity is shown towards such errors. The religious and formal *Prāyas'chitta* (expiation ceremony) of the lower Hindu castes is dispensed with but the practical adjunct to it is insisted on. In other words, the erring family provides a feast with plenty of liquor to the caste. This done, the repentant lady and her child or even children are received back and are thereafter regarded as neither better nor worse than any others. Hence moderately fair complexions and regular or aquiline features due to miscegenation with higher races are by no means uncommon among the Bhils.

Dress :—The man wears a loin-cloth with a *dhoti*, if circumstances permit, and a red *pāgree* (head-dress) which is often a chance collection of wisps of red rags. The women wear skirt, *sari* and bodice and a few glass or silver bangles and necklaces and some also wear anklets or toe-rings. Some sections in the wilder parts of the district load their women with thick brass anklets right up to their knees so that the wearer has to sit with legs extended. Orthodox Bhils, both men and women, wear the hair long and do little washing.

Weapons :—The traditional weapons of the Bhils are the bow and arrows, the axe, the spear and the battleaxe. The bow is a graceful weapon made of bamboo and the arrows are tipped with

spear-like iron-heads and feathered from the vulture's wing.

Tattooing :—Tattooing is extensively practised. The Bhils believe that the presence of tatoo marks will save them from being pricked with thorns in after-life. The tattooing operation is generally performed at 10 or 12 years of age on girls,—on the cheeks, forehead, arms, chin, waist and the calf of the leg and on the feet. Men are tattooed at between 8 and 9 years of age on their arms, waist and chest. Designs vary from place to place and family to family and are now often made to suit the fancy of the person operated upon.

Food :—The Bhil lives on the coarsest food such as would almost kill a town-dweller within a couple of months. It mostly consists of jungle roots and fruit and common grain to which *Mahi* (curdled milk) is sometimes a welcome addition.

Dwelling :—The Bhil hut is a mere shed of bamboo thatched with grass and leaves. It is kept scrupulously clean and is not packed with useless things like the huts of the villagers in the plains.

Festivals and Amusements :—The Bhils observe the principal Hindu festivals. On the *Akkatij* day they perform the marriage of two dolls which represent the gods of rain. As soon as the rains commence the dolls are thrown into a stream. During *Navrātra* some *juvar* (barley) is placed in seven baskets and water is sprinkled over it till it germinates. Music and dancing is performed round the baskets. On the *Dashera* day the bas-

kats are taken to the nearest stream and floated down it. A fair called *Bhagoriahāt* is held just before the *Holi* festival. The men put on their best clothes and, carrying bows and arrows, dance in a circle. The practice of scattering food on the roofs as an offering to ancestors on all festive occasion is very common.

Bow-and-arrow contests and dancing and music are the usual recreations. A special performance takes place during the *Holi*. A man is blackened with charcoal and dressed in a blanket and another man is dressed as a woman. These two dance while all present sing obscene songs. The principal instrument of music is the drum.

V. *Marriage.*

No Bhil can marry outside the tribe and within his or her own clan. The village Bhil usually avoids taking a wife from among Bhils living close to the towns. Infant marriage is non-existent. The parents usually settle the marriage but courtship is by no means uncommon. When pre-nuptial sexual intercourse has taken place with the affianced groom the marriage ceremony is dispensed with and the girl is simply made over to the man.

Marriage ceremonies :—A few persons from the boy's side go to the girl's house to settle the betrothal. If the girl's guardians are willing a small sum is paid to the *Patikas* who purchase *gūr* (meat) and wine for the entertainment of the guests. Each party then retire to a distance and

settles the bride-price and the terms of the marriage. The betrothal then become complete. The elders of the village fix an auspicious day for the marriage.

The boy and the girl in their respective houses are anointed with oil and turmeric. This marks the commencement of the marriage ceremonies. For a few days the boy and the girl are taken in procession in their respective villages when relatives pay such small sums as their means will permit. This ceremony being over, the marriage *Maṇḍap* is erected. Various unimportant ceremonies are performed under the *Maṇḍap* before the bridegroom's party starts for the bride's village. On reaching the bride's house the bridegroom touches with his sword the ornamental hanging on the door. Clothes and shoes are presented to the girl early in the morning. The bride bathes and dresses herself in those clothes. The bride's mother puts a long piece of cloth round the boy's neck and draws him on to the family deity. As soon as the bridegroom reaches this place the bride extinguishes the lamp. The boy again lights it and worships the *Mātā*. The ends of the upper garments of the couple are knotted and their hands are joined together. A Brahman or, in his absence, any caste member assists in the performance of "Hōm" in which oblations of *ghee*, oilseeds, *etc.*, are offered. With their hands joined, the bride and the bridegroom go seven times round the nuptial fire. Then follows *Kanyādān*. Some cash and a few clothes are given and the

hands of the couple are separated. The bride and the bridegroom's party then depart singing and dancing.

The cost of the ceremony to the husband is in the vicinity of Rs. 100/- while to the bride's father it seldom exceeds Rs. 50/- Owing to loss of credit of late years less is now spent on marriage but in practically every instance a loan is needed which follows the borrower to the grave. The marriage customs are in the main the result of contact with the Hindus and so is lavish expenditure on this and other ceremonials.

The ceremonies described above are observed by the well-to-do and the Hinduized section of the community. Less exacting forms of marriage are, however, common. Thus girls are often taken away by force or by mutual secret consent immediately after betrothal. Sometimes a girl of her own free will goes to live with her lover. Marriage by capture or simulation or capture is also common. The usual time for abducting girls is the Holi festival. The young man assisted by his friends makes off with the girl. These unions are often regularized by the verdict of the Pañchayat, which as a rule does not cost much.

Divorce is very common among the Bhils. The aggrieved man usually calls together his village Pañchayat and in their presence tears off a piece of cloth from the end of his turban, which he hands over to his wife declaring that as she has been unfaithful to him, she will in future be a sister to him.

The discarded woman takes the piece of cloth and hangs it on the top of her father's hut where it remains for a month. This shows that her former husband has no right over her and that she is free to re-marry.

VI. *Funeral Ceremonies.*

The Bhils cremate their dead. They bury babies, lepers and persons committing suicide or dying of small pox. On the occurrence of death, notice is given by the firing of guns before the deceased's house, while the village *dholi* (drummer) sounds his drum. The corpse is bathed and dressed and a little bread and *gur* is tied up in a corner of the corpse's garment. The bread is made of flour freshly ground, care being taken that the hand in grinding moves from left to right. On coming to a *ber* tree the corpse is set down while all present proceed to pick up stones with which a heap is made. A piece of cloth torn from the dead man's garment is thrown over the tree. The corpse is then picked up and put down near a stream or tank where a pyre is made. The eldest son sprinkles water over the corpse, which is then placed on the pyre and burnt together with the man's bow and in the case of a female some favourite ornaments. When all is over, the company bathe and then go to the deceased's house where liquor is produced for all. Food is then given to all. On the third day the unconsumed bones are separated from the ashes and placed in a vessel and buried near the house where they remain till the 12th

day after the ceremony is performed, after which they are thrown into the nearest stream. The deceased is provided with food and drink on the third day, the provisions being placed under the *Ber* tree where the corpse was placed on the first day. The stones heaped up there are scattered.

VII. *Religious beliefs and Superstitions.*

The Bhils call themselves Hindus claiming to be the worshippers of Mahādeo. They also reverence Ganesh, Rāma, Bhairōṇ Hanumān, Kalka-devī, Chāṇḍī. Mātā and Yama. But their outlook is essentially animistic. Many minor gods and forest and mountain deities are worshipped and almost every village has a local god. Brahman̄s are not as a rule employed for religious purposes. The really important person who invokes spirit, cures diseases, drives away pests and averts calamities is the *Badwa*. Should any men fall sick or an epidemic appear in the village, this man is called in to discover the origin of the calamity. He falls into a trance, discovers the identity of the evil spirit to which the calamity is due and finds out the means of placating it. In olden times diseases and calamities were attributed to seemingly uncanny old women who were subjected to various ordeals.

The Bhils use charms for snake-bites, severe fever, cattle diseases and indeed generally where all the known remedies have failed. The belief in omens is also universal,

VIII. *Inheritance.*

Tribal custom determines inheritance. If all the sons live together—which is rarely the case—they share equally in the paternal property. Otherwise half the property goes to the youngest son who is responsible for the maintenance of his sisters and the payment of expenses incurred on his father's funeral and the remaining half is divided among the elder sons. A widow is mistress of her husband's property for life, provided she behaves herself properly. A daughter can under no circumstances inherit her father's property.

IX. *Panchayat.*

The Pañchayat mostly deal with disputes relating to women and petty cases pertaining to caste but their authority appears to be weakening. Few now care to abide by the decision of the Pañchayat.

X. *Occupation.*

The Bhils are now settling down to agriculture and the majority of them have a fixed abode. Some have taken up the work of village watchmen but the number of those who work as agricultural labourers is enormous. Of these a great many go every year to Malwa to reap the harvests. Joint cultivation is rare, each household living ordinarily at some distance from the other and cultivating its own plot of land.

XI. *Language.*

The Bhils speak the Bhili dialect which is mainly derived from Gujarāṭi and is also influ-

enced by some dialects of Malwa. The basis of the Bhili dialect may have been Mūṇḍā or it may have been Draviḍian, but it has been completely overlaid by an Āryan superstructure.

XII. *Appearance and Character.*

The typical Bhil has a broad nose, thick lips and a strong and rather prominent upper jaw. His complexion is dark, and his hair is black but not wooly. The eyes are straight and usually black.

The Bhils have lost much of their suspicion of strangers and live like the lower caste people. They are capable of great endurance and are truthful unless spoilt by proximity to towns and cantonments. A happy and careless people loving idleness and ease, the Bhils go through life with the least possible exertion. They are prodigal in times of plenty, philosophical in times of want, and optimistic at all times.

XIII. *Effects of Governmental Measures.*

The history of the native races in America, Australia and more particularly in the Pacific is a sad one; they have dwindled away and are dying out before civilization. No such pathetic spectacle has presented itself in the Amjhera District. Here the administration has had practically a clear field and has not had to eradicate the evils produced in the Pacific and elsewhere by the disastrous activities of traders and mission workers. The only factor that has influenced the institutional life of the Bhils has been Hinduism but contact with it does not appear to have in-

jured the native fibre of the race. Hinduism has destroyed little, and so in spite of all that it has done to uplift these submerged people, they still remain sufficiently distinct and backward to require in many respects defferntial treatment.

This brings us to the question,—What have the Government done for these people? It has already been pointed out that the Durbār's connection with the Amjhera District, which is at present the stronghold of the Bhils, is comparatively recent. But more recent still are the measures which the Durbār have introduced to protect and advance the interests of their Bhil subjects. It was reserved for the late Scindia to set the ball rolling in this matter. He discarded the old policy of drift and indiffeance and installed in its place a vigorous one of initiation and resolution. Since the inauguration of this new policy the district has witnessed particular progress in nearly every branch of administration. It has seen the establishment of peace and great spread of medical and sanitary improvements, an increase of protective irrigation works and a general advancement of material prosperity among the indigenous population. We have had during the last quarter of a century a rapid extension of the Co-operative Movement, of Agriculture and of communications and transport services. Then again progress has been made in education, in the administration of civil and criminal justice and initation of measures calculated to prevent the exploitation of the aboriginals by their more advanced rivals.

We have here a considerable catalogue of topics; but in this note I can only just touch on a few of the prominent of those which are intimately connected with the development of the Bhil population.

The Durbar's greatest achievement in this district is the establishment of peace and ordered government - such as its inhabitants had not known for centuries. The effects of this measure are reflected in the increasing numbers and prosperity of its Bhil population. Since 1921 the population of the district has increased by 17 per cent and the Bhils themselves have added about 25 percent to their numbers. This extraordinary growth has been made possible by the fact that the Durbar's administration has brought peace and security and law and order to the home of every Bhil. As regards prosperity there are definite indications that there has been much improvement in the individual income; but in the vital matter of the improvement of the standard of living a snail's pace appears to have been decreed by the existing circumstances. It must be accepted as axiomatic that the general prosperity of the Bhil can never be rapidly or substantially increased so long as the increase in his income continues to be swallowed up not by a rise in his standard of living but by the increasing number of mouths in his nursery. Of all the communities living in the State, the Bhil is the most prolific and in consequence has a relatively numerous family to support. This problem lies at the root of the

whole question of their economic future and it is useless to bilk the fact. The requisite reform which involves a drastic reduction in the birth rate, falls within the social rather than the economic sphere and belongs to a domain from which the Government is at present excluded both by popular desire and deliberate policy.

A prominent feature of the Darbār's administration is their non-interference with the customs and usages of these primitive peoples. They have put down with a strong hand tribal tyrannies and such practices as were at variance with the primary dictates of humanity, but they have let alone the more innocent of the customs and prejudices of the tribe. The importance of official toleration in such matters cannot be over-emphasized. For it is the customs and festivals of primitive people that give meaning and cohesion to their tribal life. Deprive them of these and they will have left to them only a sort of empty and emasculated tribal life and will themselves fall into that psychic apathy and physical decline which have decimated so many primitive communities in the Pacific and elsewhere. The great merit of the Durbār's administration is that it has not impaired the social solidarity of the tribe. It has simply surrounded the Bhil with forces which make it impossible for him to go back and at the same time enable him to live his own life and develop it on his own lines.

The Bhil in this State is subject to the same laws as are applicable to the more advanced sec-

tions of the population. This involves some hardship owing to his own poverty, ignorance and honesty. Much has recently been done to ensure a more humane administration of the law, to simplify the procedure in courts and to reduce the cost of litigation. Of this the establishment of Pañchāyat Boards is one instance out of many. All the litter of petty debts to money-lenders and tradesmen, overdue rents and such matters come before the courts and they decide them with as much common-sense justice as is needed. Lawyers are not permitted to appear in proceedings before these courts and the parties are exempt from the payment of court fees. The procedure in cases involving larger claims is equally simple but they are heard and decided by the regular courts. It seems that the administration of Civil justice in this district is a function for which the provision of full-fledged regular tribunal is the provision of a steam-hammer to break nuts. What is needed is to find for the Pañchāyat Boards conscientious people, and gradually to enlarge their powers and increase their efficiency.

The attitude of the Bhils towards our penal laws has undergone a vast change during the last thirty years. That law should punish offences against life and property is now recognised in the remotest corners of the district; but the provisions relating to the abduction of women and the restrictions on the distillation of liquor and on the freedom of the forests are not so cheerfully

accepted. The prohibition of distillation is without doubt a hardship to the Bhil, who must offer to his gods liquor distilled by his own family; but prohibition of the kind must be submitted to in the interest of the community itself.

Nothing touches so closely the life of the Bhils as our Revenue and Tenancy Laws. Whether these laws are or are not suitable and simple enough for a people deficient in ideas and representing an earlier stage of social development is a question on which two opinions are possible. But the fact cannot be gainsaid that the sympathy and understanding with which our officers have applied these laws to the Bhils have more than made up for such deficiencies as may have existed in them. This trend is the dominant note in the administration of the district to-day.

Mention must here be made of a special regulation which has recently been introduced in this district in order to prevent land belonging to Bhil proprietors from passing into the hands of foreign adventurers. The need for this measure has long been obvious. The rapid opening up of communications involving contact at many points has entirely altered the old order of things. Every year greater inducements and fresh facilities have been offered for immigration to the Bhil portion of the district. This has substituted for casual contacts the disconcerting element of conflict of material interests which in its turn has led to increasing displacement of Bhil Zamindars by the more forceful immigrant Baniās, Brāhmins

and Muslims. It was incumbent on the Government to check this natural movement; and the measure referred to above has been promulgated to achieve this end. No administration worth the name could stand aside and allow the competing forces to deprive these helpless people of their last foot-hold in the hills. Government are not opposed to the improvement of the Bhil by contact with civilization but only desire that he should be given his share of oxygen and a fair opportunity of adapting himself to new conditions unhampered for a time by undue competition from outside. The significance of this policy will only be fully appreciated by those who know the district from inside. Whether a Bhil Zamindar is good or bad for the general prosperity of the village is of little moment. To my mind the fact that he is invariably preferred by his tribe and treats his tenants well far outweighs such defects of his character as improvidence and intemperance. In any case, whatever view be taken of his value to the community nothing can be said in support of those to whom his villages have passed through usury, deceit or trickery. They are nearly always oppressive money-lenders who treat their villages on the most strict commercial lines, levy all sorts and kinds of illegal dues and have no regard whatever for tenants' rights and interests. The men to whom small shares have already been transferred are the worst possible land-lords and their dominance and authority in the village is fraught with grave danger to the welfare of the community.

As regards the education of the Bhils, this was unheard of until quite recently. The State now maintains 12 Bhil Schools and three Bhil Boarding houses. Speaking generally, the Bhils have got a little less than their general share of the advance made in Primary education and absolutely nothing of the advance in the Middle School education. In common with other primitive tribes in India, the Bhils are generally handicapped in the acquisition of literacy by the fact that they are given their education in a language which is not their own. Education will not meet the Bhil's needs unless firstly it is of definite use in his life and secondly it is linked on to his past and does not involve a tearing away from his tribe. A Bhil who has lost faith in his fellows has nothing to cling to and becomes an exile in the midst of his own community. The importance of organizing Bhil education on these lines is recognised and the schools of Sardarpur, Bag and Tanda are intended to become in course of time models of what is needed.

MISCELLANEOUS CONTRIBUTIONS.

ORIGIN OF CASTE: A REJOINDER.

At this late hour may I say a few words in defence of my hypothesis (in *Indian Antiquary*, lx, pp. 49-52, 67-70, 91-95) regarding the origin of Caste? When I wrote my article I was living in the United States, far from libraries possessing the latest works on India, and besides, my principal interest at that time was not in the ethnology of India but in that of the American Indians. I am therefore fully aware of the fact that my article has many shortcomings. Later in 1934, during the International Congress of Anthropological and Ethnological Sciences held in London, I heard some comments in conversation with several Indian gentlemen I happened to meet there, but again other interests prevented my taking part in the discussion on Indian ethnology. Still later I became interested in Finno-Ugrian ethnology, and the whole matter was dropped as far as I was concerned. Now my studies seem to lead me back to my first love—Indian ethnology,—and therefore I feel it incumbent on myself to take this opportunity of answering my critics (I do not know if there are others).

Prof. J. H. Hutton, of the Cambridge University, after a long and erudite discussion as to the origin of caste (in *Census of India* 1931, vol. I. India, Part 1. Report [Delhi, 1933], p.

434 note) in which he came to the conclusion that caste had a magical origin, says: "I agree in ascribing caste to a belief in magic, but I cannot accept the rest of Dr. Bonnerjea's hypothesis which seems to me to be contradictory." Dr. Hutton does not state which particular hypothesis he finds contradictory, and therefore I am at a disadvantage in answering him. It seems to me, however, that he accepts my conclusion, but does not accept the arguments on which that conclusion was based. It is possible that he takes objection to my statements that the system of caste was introduced by the Indo-European conquerers, and that it had its origin in primitive superstitions and in a belief in magic. It would follow then that I regarded the Indo-Europeans as possessing "primitive superstitions" and a "belief in magic." To make myself quite clear I may say that that is exactly what I mean, and am ready to prove by documentary evidence that it was so.

The next criticism of "Bonnerjea's Theory" was made by Mr. S. C. Roy (in *Man in India*, xiv, 1934, p. 216). He summarily dismisses the whole by saying, "That caste, in its present form, was developed through the interaction between Aryan and non-Aryan ideas and practices is indeed probable, but neither the existence of the caste system in Dravidian India nor the 'superstitious' basis of caste appears to have been made out by cogent evidence." In other words, Mr. Roy is willing to accept my hypothesis provided

I proved the two things mentioned by him. With regard to the first point raised by him—existence of caste in Dravidian India—may I be permitted to repeat the title of my article? It is “Possible Origin [*not* Growth] of the Caste System in India [*not* among the Indo-Europeans].” If I were to prove the existence of caste *anywhere*, or among any people, in India, it would be showing the absurdity of the title of my paper, for then I could not write about the “origin,” but only about the “growth.” When I say “in India,” I mean among *all* the peoples living in that part of the Asiatic continent which we call India today. Therefore by the expression “origin of caste in India” I mean exactly what it conveys.

It is true that I had mentioned in my article that rudiments of the caste system exist, and have existed, among other peoples and in other climes. But that is not the same as the system itself. European countries of modern times—from a historical standpoint—show class distinctions such as the aristocracy and the upper and lower middle classes, *les aristos* and the *sans-culottes*, or again the Junkers and the others, and so on. But we could hardly call them “caste”—they are merely the germs from which the “castes” grow. In my opinion, these germs were all that the Indo-Europeans and the Dravidians possessed, and from these germs there grew up in India the whole complicated system of caste.

The second point brought up by Mr. Roy about the ‘superstitious’ basis, appears to me to

be due to a misunderstanding. *Mea maxima culpa.* I apologise. I think I proved *magic* among the peoples of India—Indo-Europeans as well as Dravidiāns,—and only in the last word of the last line of the article I had used the word “superstitions.” I should have said “primitive magic” instead of “primitive superstitions.” But is not magic a superstition? I would like to be informed.

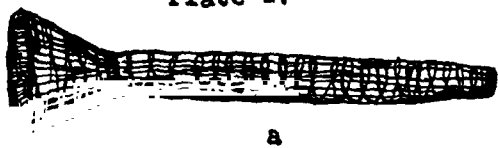
Finally I should like to say a word about Mr. Roy's quotations. He quotes me as writing “after caste had been finally [*sic.* for “firmly”] established in India it continued its existence on the occupational basis.” So far, so good; but he neglects to quote the rest of the sentence which was—“the occupation of being a magician.” The dash here is important, for I believe that according to the rules of English grammar it lays special emphasis on what the “occupational basis” was; at any rate, it seems to me to change the whole meaning in that context. I am inclined to believe that the text of the sentence as published in the *Indian Antiquary* has an altogether different meaning to that of the text as quoted in the *Man in India*.

Biren Bonnerjea.

*Royal Hungarian University,
Budapest.*

"MAN IN INDIA"

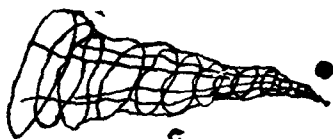
Plate I.



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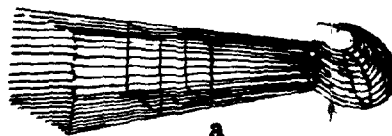


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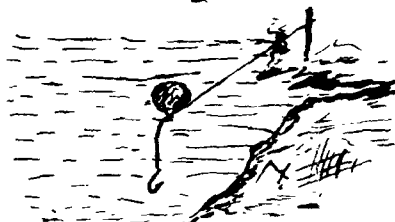
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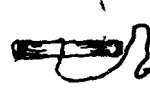
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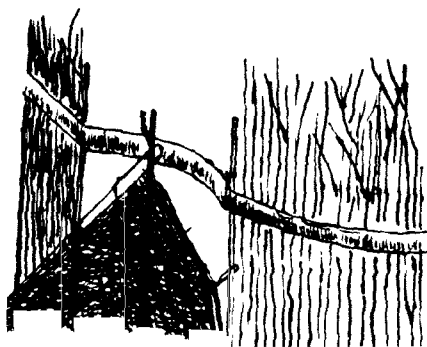


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Plate III.



INDIAN ETHNOLOGY IN CURRENT PERIODICAL LITERATURE.

In *Man* for September, 1938, the editor of this Journal contributes an article on "An Indian Outlook on Anthropology." In that article he pleads that Cultural Anthropology should not, as it generally has been in the past, limited to the study of the lower cultures but should include the ascertainment and interpretation of social characteristics and evolution of all human groups, aiming at a future integral understanding of human culture. He writes,—“The culture of a particular human group certainly needs to be described for its own sake—both functionally and historically. But it also needs to be studied in its setting of culture as a whole viewed throughout mankind.... Though the older school called *evolutionist* was apt to go wrong in ascribing a particular form, noticed in a particular group, too readily (though not invariably) to an independent growth within that group, the *historical* school which sought to correct this error, “too often made their study fragmentary by attending too little to the general picture of the group's life, and by concentrating their attention too much on supposed parallels between one group and another in respect of particular features which were then discussed as a product of diffusion of culture.” This “over-emphasis of diffusion has sometimes led to the undue and dogmatic hardening of useful ideas of *Kultur-Kreise* or Culture-Regions into frames wherein the facts of the life of a particular group are sometimes made to fit, even if they have to be mutilated for the purpose.”

“The *functional* ethnologist has seen the weakness of both the *evolutionist* and the *historical* school. But his own attitude is to some extent a confession of impotence. To picture a group at work is a worthy aim. To picture it, without draw-

ing attention to evidence of evolution within or borrowings from without, may lead to misconception. Moreover, the functionalist has given special emphasis to the study of cultures as exhibiting the ground-plan whereon 'civilization' has been built. But there are probably few lowly groups without borrowings from those who have gone further along the way—borrowings that may persist within a lowly group in an imperfect (even decadent) form. We do not as yet know what items can be safely and completely described as part of the ground-plan." "The function of Social Anthropology cannot properly be limited to discovering the functional inter-relations and the role of specific customs and rites in the entire social complex. Historical relations, past and present, and other conditions that have helped to produce the fundamental attitudes or genius of a culture also require investigation." Therefore, the author contends, "The existing method of concise classified presentation in an ethnographic monograph of the various aspects of a culture will have to be continued, with the added feature of pointed but passing reference to their inter-relations, and to the functional nexus that binds them into one integral whole."

"The vital facts of human culture are facts of spiritual experience; and therefore the historian of culture must seek to identify himself in spirit with the state of soul evolution of the people he studies," in order to gain a full comprehension of the inner meaning of the customs and institutions of a particular people. "The objective methods of investigation of cultural data have to be helped out not only by historical imagination and a back-ground of historical and geographical facts, but also by a subjective process of self-forgetting absorption or meditation (*dhyāna*), intuition born of sympathetic immersion in and self-identification with the society under investigation."... "The spread of this attitude by means of anthropological study can surely be a factor helping forward the large *unity-in-diversity-through-sympathy* that seems to an Indian mind to be the inner meaning of the process of human evolution, and the hope of a world perplexed by a multitude of new and violent contacts, notably between Eastern and Western civilizations."

In *Man* for October, 1938, Dr. K. de B. Codrington, in a note on "Bāra Gārī, the Dragging of the Twelve Carts" gives an account of the ceremonial "dragging of twelve carts" called *Bāra Gārī* to the shrine of "Māri Mātā" or 'the Pestilence Mother.' This ceremony is gone through in the fulfilment of a pledge, either the recovery from protracted illness or the removal of barrenness of a woman. The guardianship of the shrine is shared by two *pūjāris* of which one is a Mhar and the other a Mang. It is remarkable that even the services of a Muhammadan Mullah are requisitioned to cut the throat of the sacrificial goat. An invariable feature of this ceremony is the phenomenon of "god-possession" manifest in the protagonist. Dr. Codrington opines that psychologically this is a women's festival, though they have no part in the rites, except in the preparation of the 'man' for the ordeal." Further, according to him, "The validity of the rite lies between magic and luck-bringing," and "it is founded upon a tradition of domestic heroism." "It is very difficult to express the quality of the emotion of this ceremony. Among the men it is largely a matter of turning out and shouting. The women are very intense, however; the preliminary giving of offerings is done very quickly and dignifiedly. The drama from the point of view of the protagonist is evident. It is, however, difficult to say anything of the tradition. With the boys, I am sure, the heroic dominates—it is one of the very few star turns of village life. They probably all hope that they will get a chance of doing it. In the case of boys whose parents engaged for them in the days of their childlessness, it has, of course, been hanging over their heads all their lives. The idea that the protagonist is filled with the goddess is acknowledged: it is common-place in India. I think there is a feeling that the carts must move (*sic.*, of themselves), a feeling having something to do with luck."

In *Man* for December, 1938, Mr. D. H. Gordon, in a letter, points out the impropriety of including Central Indian sites in Western India, as appears to have been done in a table of Micro-lithic Sites published in *Man*, 1938, p. 19.

The *Journal of the Royal Anthropological Institute* for January-June, 1938, contains the Presidential Address to that Institute on the 28th June, 1938, delivered by Mr. H. J. Braunnholtz. The Address gives "a cursory sketch of the story of ethnography in the British Museum." Mr. Braunnholtz's observations regarding the proper method of collection and arrangement of ethnographical exhibits and their documentation and labelling deserve the attention of the Curators of our Indian Ethnographical Museums.

In *Folklore* for September, 1938, Prof. A. M. Hocart contributes an article headed "In the Grip of Tradition," in which the author's main thesis is that "Man is a traditional animal, and must always fall back on tradition for means of expression." He illustrates this by the constitutional crisis of December, 1936, in England, over the proposed marriage of ex-king Edward. Tradition requires certain qualifications in a queen who is to be the king's partner in a sacred marriage, and in order to be an effective partner she must have had no commerce with anyone else. The Ancient Indian exception which required the rite of *Varunapraghāsa*, (vide *Satapatha Brāhmaṇa*, II, 5, 2, 20) is an exception which proves the rule,

"Communities form habits just like individuals, and habits are more deeply ingrained than reason. Reasons come in the beginning when they are necessary in order to establish a habit. Once the habit is thoroughly established the reason drops it. The habit may then surround itself with a bodyguard of emotions which reasoning lacks, and so when reason interferes it often gets the worst of it, one of the best examples of this is the incest taboo. The reason of it is completely forgotten, but the custom has dug itself in so securely that even the most advanced thinkers have not dared to disturb it. The constitutional crisis showed how the people can be moved by attacks on the traditional ways which appear to the high-brow to be of no importance because they are quite out of touch with realities, or what he takes for realities. The high-brows themselves were carried away by the wave of feeling." Another striking illustration of the 'grip of tradition' is the use of number twelve derived in all probability from the twelve signs of the Zodiac and coming down from the days of ancient Sun-worship. The Roman emperor was the earthly representative of *Sol Invictus*, the Invincible Sun. Charlemagne who revived the Holy Roman Empire had twelve peers, the Normans who conquered South Italy fixed at twelve the number of counts who ruled the country. English jurymen still number twelve. "It is not uncommon for Hindu teachers to have twelve disciples." The Vedic king in the course of his consecration on twelve successive days calls at the house of each of twelve court personages. Of these the first eleven are called his jewels, but the twelfth is an obscure personage, the discarded queen who represent Nirriti, the Earth as the abode of decay. There is no hint that these personages are associated with the Zodiac, but everyone represents a god whom we know, from other evidence, to have been in charge of some star or constellation lying near the ecliptic, the only exception being the "way." The President of the Royal College of Constantinople in the tenth century "was named the Sun of Science, his twelve associates, the professors in the different arts and faculties, were the twelve signs of the Zodiac." "Napoleon's behaviour (which led

a critic to suggest that Napoleon was a Sun-god and his twelve Marshals the signs of the Zodiac) 'was to some extent conditioned by an ancient theory which assimilated the state to the universe. The state had to copy the normal universe in order that life should be normal. The exact form of such a state necessarily varied with the knowledge of the universe and with the direction of men's interests, whether they were engrossed by the weather, or stars, or by some new discovery about the sun.' "It is a peculiarity of man that his impulses cannot take definite shape without a model on which to mould them. The motive power is within him but the machinery he has to borrow from predecessors." "Man is really an unimaginative creature. His wider flights are but copying with alterations. It is his weakness and at the same time his strength, that his impulses are so vague they need example to give them definition. Hence his immense power of adaptation. His impulses do not take concrete shape straightaway as does that behaviour we call instinctive. They have no definite direction, so that he flounders about, instead of going straight to the point. Yet in the long run he is the gainer, because he is thus free to go off in any direction which circumstances may dictate. The direction imparted by tradition which is ever being adapted to present needs....His impulses to emulate, to surpass, to resist, or to lead are all as undetermined as his impulse to speak. They are as much in need of precedents to determine them. Nature is the mother, tradition the mid-wife of his aspirations."

In the *Journal of the Bihar and Orissa Research Society*, Prof. J. N. Ghosh contributes a suggestive article on the "Antiquity of Gaya," in which he seeks to prove from ancient texts that the Vedic Āryans (probably sons of Vis'vamitra) "advanced as far as the outskirts of Magadha in Rig Vedic period, if not earlier," that "the Magas (probably the ancestors of the Gayāli Brāhman) must have been the earlier settlers of Magadha"

and "were sun-worshippers." The author's theory is based on a new interpretation of a passage in the S'unahs'epa episode of the *Aitareya-Brāhmaṇa* (VII, 3. 18).

In the same number of the *J. B. O. R. S.*, Prof. V. R. R. Dikshitar, contributes a short article on "Paternal 'Despotism' in Ancient India" in which he cites several ancient texts to show that the ancient Indian conception of the king's duty to his subjects was that of a wise and loving father towards his children, and that the king was required to be ever "devoted to the welfare of his people by thought, word, and deed."

In the *Quarterly Journal of the Mythic Society*, Dr. A. K. Coomarswamy contributes an article on "The Inverted Tree" described in ancient Indian texts and compares it with the similar conception among a few other peoples and religions. It is "the Tree of Life, extending from earth to heaven or heaven to earth and filling with its branches all the inter-space."

"When this *As'vattha*, so nobly rooted, has been cut down with the axe of non-attachment, then is that station (*padam*) to be reached, whither having gone they return no more." (*Bhagavat Gītā*, XV, 3-4). This is, according to the commentary of S'ankara, "the 'Tree of the World-vortex' (*samsāra-vriksha*) compact of all desires and activities; its downward branches are the worlds in which all creatures have their several beings. It is rooted in the Pure Light of the Spirit, in Brahman, immortal and immutable; as a Tree, surrounding with the cries of all those, whether gods or men or animals or ghosts, whose nests are in its branches, it is a growth without beginning or end in time, but of an ever-changing aspect. The Tree has all to do with actions, whether ordinate

or inordinate, and their rewards, the fruits of the tree." Among other articles in this issue are those on the "Poligars of Mysore and their Civilisation" by Mr. P. R. Ramchandra Rao, and "Studies in Bird-Myths, No. LIII, by Mr. S. C. Mitra"

In the *Poona Orientalist*, Mr. Fatah Singh contributes an article (not yet completed) on "Agni and Soma."

The Jubilee Volume of the *Anthropological Society of Bombay*, (1937, published in 1938), contains the following articles: "Who are the Descendants of the people of Mohen-jodaro?" by Sir Patrick Cadell; "Tree Worship in Mohen-jodaro," by Rev. Fr. Heras; "The Origin of Certain Pot-forms," "By Harold Peake; "Pebble Mounds" by G. E. L. Carter; "The Ethnographical Survey of India," by R. E. Ethnoven; "The Oldest Implements of Man" by Rev. Dr. Schmidt; "A leaf from the Cultural Anthropology of Orissa," by S. N. Roy, "Some Aspects of the Economic Life of the Bhoksas and Tharus of Nainital Tarai" by Dr. D. N. Majumdar; "The Functional Character of Baiga Mythology," by Verrier Elwin; "Physial Data from Kathiawar" by Dr. G. S. Ghurye; "Vratas" by S. S. Mehta; "On the Adonis Garden of Lower Bengal," by S. C. Mitra; "Sri Vatsyayana. An Ethnological Study of India of 300 B.C." by M. K. Sett; "Origin of S'alagrama and Tulasi Worship," by P. G. Shah; "Caste in Travancore" by L. A. K. Iyer; "Social Bearings of the Hindu system of Marriage," by Dr. P. H. Valavalkar; and "War and Peace :—A Human Valuation," by Dr. N. A. Theethi.

The Journal of the Greater India Society for July, 1938, contains the fifth instalment of an interesting and informative paper entitled "Contributions from the Mahāvamsa to our knowledge of Mediaeval Culture of Ceylon" by Dr. Wilhelm Geiger.

In the *Journal of the University of Bombay* for September, 1938, Mr. V. N. Naik contributes an article headed "Culture—a Causerie," in which he defines 'Culture' as follows:— "To use life in the actual for definition and clarification of the ideal, and to use the ideal in service of the limitations of the real—that is, to attain the rhythm of freedom and the harmony of the soul beneath the shadow of a thousand Damoclean swords. That is 'Culture,' the art of life—practised for energy and soul action by man 'as a soldier in the liberation war of humanity.'" "The pure culture of India was the worship of *sātyam*, *shivam*, and *śāntam*, in the name of *Advaitam*—plain living and high thinking coupled with service, humanity and beneficence, and in the spirit of renunciation, resignation and reverence." "Our forefathers," says Rabindra Nath Tagore, "did spread a single pure white carpet, wherein all the world was invited to take its seat in amity and good fellowship. No quarrel could have arisen there; for He, in whose name the invitation went forth, for all time to come, was *Shāntam*, *Shivam*, *Advaitam*;—the Peaceful, in the heart of all conflicts; the Good, who is revealed through all losses and sufferings; the One, in all diversities of creation.' '*Ātmavat sarvabhūteshu jah paś'yati sa paś'yati*.' 'He alone sees, who sees all' beings in himself.' That is *culture*,—and when that is said, all is said."

The Modern Review for December, 1938, contains an informative article on "The Population Problem" by Prof. A. G. Fernandes; and an interest-

ing article on "The Charanas of Rajputana" by Devendra Satyarthi.

The Hindusthan Review for September, 1938, contains a "Short study of Freud's system of Psycho-Analysis" by Prof. C. A. Dobson.

The *New Review* for September, 1938, contains the first instalment of an article on "Municipalities in Ancient India" by Mr. V. R. R. Dikshitar which deals with the Indian cities and townships in the Vedic Age; this is followed up in the October number by accounts of Indian towns or municipalities in Post Vedic and Epic and Mauryan epochs.

In *Indian Culture* for October, 1938, Mr. R. N. Saletore contributes an article on "The Bedars in Marāṭha Times;" Dr. H. C. Ray Chaudhuri contributes "A Note on Family Nomenclature in Ancient India," in which he gives one or two references and corrections to a former note that he had contributed to the January number of that Journal. In the same number of the *Indian Culture* Mr. K. S. Ramaswamy Sastri in a Note attempts to prove that ancient Kishkindhyā and Lankā were "Āryan colonies."

In the *Indian World* for December, 1938, Sir S. Radhakrishnan in a short article on "The Art of Living" writes,—"The individual is the final fact of life. The end of society is to raise the quality of the individual. Time progress is to be judged by the chastity of the individual mind and the charity of his temper. But to be kind to your neighbour is not to make him like yourself. It is to give him the chance to be himself....He must

remain himself, unique, distinct and different from all other individuals....There is a distinction between the mechanics of living and the art of living. Politics and economics may provide us with all those conditions which are essential for living....True happiness depends on living for a purpose. Educators, artists and philosophers help us more than politicians in this matter of giving direction to life, of teaching us the art of living....With all her poverty and degradation, her suffering and subjection, India still bears witness to the cult of the spirit. .. It is our glory and privilege that in every age and in every part of this country we have been able to produce types of men who stood for this ideal. We have individuals even today who tell us that faith in the eternal alone can release the world from the nightmare of power politics, that we must substitute the principle of love for hate....Man lives for a purpose larger than he sees....This is the message of India."

NOTICES OF BOOKS.

Anthropology and Sociology.

The Study of Man : An Introduction :—By Ralph Linton, (D. Appleton-Century Co. New York & London, 1936) Pp. 503. Price \$ 3, 00.

This is among the best introductory text-books that we know for the study of Man and Culture. The main problems of Anthropology and Sociology are treated in this book in a systematic order with great clarity and precision. Besides giving a comprehensive account of the results of anthropological research up to date, Professor Linton enriches the volume with an amount of fresh illustrations, and interpretations which generally appear to be probable and sound. We strongly recommend the book to all beginners in the study man.

Society : A Text book of Sociology. By R. M. McIver, (Farrar and Rinehart, Inc., New York, 1937), Pp. 596.

We do not know of a better text-book for the beginner in the study of social relationship as such. In an Introductory section the author very clearly delimits the respective scopes or rather special interests of different social sciences and indicates their real indissolubility or integrity as follows :—

** Anthropology* studies man (especially primitive man) in terms of the whole scheme of his activities and his products; it is as much interested in his arts and techniques, his myths and his superstitions, as in his social institutions. *Economics* studies man as a wealth-getter and wealth-disposer and inquires into the relation of wealth (measured by money) and welfare. *History* studies the record of man following the time-order of significant events. *Psychology* studies man as a behaving individual, or as some prefer it, the inter-relation between the organism and the world to which it responds. *Social psychology* is then a branch of psychology concerned with the ways in which the individual reacts to his social conditions. *Sociology* alone studies social relationships themselves, society itself. Thus the focus of none of these other sciences is identical with that of Sociology, and it is always the focus of interest which distinguishes the one science from another. We should not think of the social sciences as dividing between them physically separate areas of reality. What distinguishes each from the other is the selective interest... We are breaking up in thought, for the convenience of study or for the sake of practical control, that which is indissoluble in reality, and we cannot or should not be satisfied until our thought has restored the unity which it has taken away.... Until we find and keep some focus, we lose our way in the welter of phenomena, and this danger is always besetting the student of sociology.

The book is divided into three Divisions. Division I deals with the Nature of society and its relation to Environment; Division II deals with the Social Structure, its Organizations, Functions and sustaining Forces; and Division III treats of social Change, and its various Factors, Social Evolution and Social Progress.

In an Appendix a number of Questions and Exercises besides Notes on Further Reading, are added for the benefit of the student. The book

will prove eminently useful to students and their teachers.

Acculturation. *The Study of Culture Contact.*
By M. J. Herskovits, (J. J. Augustin, New York, 1938) pp. 155. \$ 2. 00.

This is a valuable book which practically breaks new ground. The term 'acculturation' was first adopted by American sociologists to denote the process of cultural change due to what English sociologists generally designate by the compound "Culture-contact." In this book the author attempts to define and orient the study of culture-contact by describing some of the work that has been done in analyzing the results of contact between peoples, and to suggest further research into the problems that arise from investigations of this kind. The previous works on these lines that the author reviews in this volume are those of E. C. Parsons on the Zapotecan community of Mitla, a town in southern Mexico; of R. Redfield on the central Mexican community at Tepo-Ztlan, of Margaret Mead on a Plains Indian Tribe described under the pseudonym of the 'Antler's'; of Paul Radin on Winnebago; of M. Herskovits on the peasants in a Haitian Valley; of I. Schapera on a South African tribe called BaKxatla; and of Monica Hunter on the Pondo of South Africa. By way of study of change in restricted phases of given cultures the author considers the 'Prophet Dance' of the North-West Indians; the Ghost-Dance of

1870 in South-Central California; the Pawnee Ghost Dance and Hand Game. The rise of a few revivalistic movements and new religious cults among 'native' folk in contact with Whites are also discussed. The author concludes with a reference to a few literary works (fiction, biography, etc.) which seek to understand and depict "the results of culture contact, especially as these impinge on the lives of individuals who live under conditions of contact," and with some suggestions for future research. In an Appendix is given an outline for the study of Acculturation prepared by Dr. R. Redfield, Dr. Ralph Linton, and Dr. M. J. Herskovits.

The Native Races of Africa and Madagascar. *By Sir James G. Frazer. Arranged and Edited from the Mss. by Robert Angus Downie.* (Percy Lund Humphries & Co., 1938). Pp. 578, 355.

Two things come uppermost to one's mind while going through the pages of this invaluable volume,—first, an appreciation of the truth that an important element in 'genius' is the capacity for taking infinite pains; and secondly, a poignant feeling of repentance and self-denunciation for our having wasted most valuable opportunities of retaining and utilizing all or most that was worth retaining in our past reading, however wide and voracious such reading may have been. The immense variety and wealth of ethnological data

regarding the primitive communities of Africa (though references even to the Ancient Egyptians are not omitted) contained in this copious selection of passages for the study of Social Anthropology from the Manuscript Notebooks of the Doyen of English anthropologists, will rejoice the heart of every sociological and anthropological student. This ponderous but most fascinating volume gives us an insight into the life, culture and mentality of not less than 234 different tribes and communities that have lived and flourished, and in some cases thrived and decayed on the continent of Africa and in Madagascar. One great advantage, among others, in having a record of this kind of the observations of successive observers extending over a period of half a century and giving us some idea of the cultural changes that time and changing circumstances bring on in successive generations, is that it gives the reader a glimpse into social and cultural dynamics.

Social Anthropology of North American Tribes. *Essays in Social Organization, Laws, and Religion.* Edited by Fred Eggan. (The University of Chicago Press, 1937.) Pp. 456. \$8.00.

These *Essays* were presented to Professor A. R. Radcliffe-Brown on the occasion of his accepting the Chair of Social Anthropology at the Oxford University. The *essays*, eight in number, are,—on "Some Problems of Social Organization" by Sol Tax; "The Cheyenne and Arapaho

Kinship system," by Fred Eggan; "Kiowa-Apache Social Organization" by J. G. McAllister; "An Outline of Chiricahua Apache Social Organization," by Morris E. Opler; "The Social Organization of the Fox Indians," by Sol Tax; "Eastern Cherokee Social Organization," by W. H. Gilbert, Jr.; "The Underlying Sanctions of Plains Indian Culture," by J. H. Provinse; and "The Place of Religious Revivalism in the Formation of the Intercultural Community on Kalamath Reservation" by Philleo Nash. As will be seen from the titles of the essays, all of them except the first are specific studies of social and kinship organization of certain North American Indian tribes; and the first essay, though dealing with certain general problems of social organization, draws upon American Indian sociology for its illustrations. In the Introduction Prof. Hadfield dwells on the importance of Dr. Radcliffe-Brown's contributions on the method of social study in America and the new orientation of the study of sociological problems. Dr. Radcliffe-Brown introduced among his students in America a strictly non-historical scientific method in place of Boas' Critical-historical and social-anthropological method. The book will prove of great interest to students of Social Anthropology.

Primitive Intelligence and Environment. :—
By S. D. Proteus (New York. Macmillan & Co., 1937),
Pp. 325. \$ 3 00.

The present volume is the result of fifteen years' extensive and intensive researches on racial differences. Though a narrative of the travels of the author in Australia, Africa, Malay, Hawaii, Japan, Borneo, *etc.*, the races specially selected for the purposes of this study of primitive intelligence and environment are the Central Australians and the Bushmen. While not disregarding the effects of environment, the learned author adduces an amount of first-hand evidence to show that hereditary factors form an important element in the mental make-up of a community, race or people as of an individual. By demonstrating that under conditions of equivalent environmental influences, two groups have achieved different levels of development in divergent directions, the author has sought to provide a demonstration of the significance of racial differences in intelligence. The author pertinently observes, "If, as is probable, complete equation of the nurtural conditions is impossible, then we can at least show that the mental advantages, such as they are, are not possessed entirely by those who enjoy the more favourable living conditions." By a comparison of advantages as regards the habitat of the Bushmen of South Africa and the aborigines of Central Australia, (supplemented by data from various primitive groups from Asia such as the Sakai of the Malay Peninsula) by means of the mental test approach in respect of social adaptability and educability, the author comes to the conclusion that the existence of group differences in mentality appears to be a fact.

Social Psychology :—*An Introduction to the Study of Personality and the Environment.* By J. M. Reinhardt. (Lippincot, 1938). Pp. 467.

The main thesis of this book is that, in man, inheritance and environment work together. "Personality is built up out of the play of environment upon the hereditary structure and the functioning capacity of the human organism; and "the individual functions consciously in relation to social values inherent in a cultural pattern." Though marked individual differences and perhaps to a less extent racial differences in behaviour exist because of differences in inherited factors, yet cultural values too exert a tremendous influence upon behavior. In order to understand human personality and human types, "we need to know not only something of individual experience as revealed in a case history, but also something of the 'race' experience which has left its marks upon the individual through the standards of value which have been crystallized in and through that experience." "Through the family, school, church, state, and ordered economic and recreational activities individual patterns of adjustment arise,—personality develops. The occupational interests defined and evaluated by cultural standards influence the individual's physical, mental, and emotional development and make-up." This volume will form a valuable introduction to the study of human personality and the environment, physical and social.

The Positive Background of Hindu Sociology :—*Book I. Introduction to Hindu Positivism*, By Benoy Kumar Sarkar. (Panini Office, 1937). Pp. 697. Rs.16.

The first edition of *The Positive Background of Hindu Sociology*, was published in 1914 (and reprinted in 1921 and 1926). The book is now being republished or rather re-written in a series of volumes (Books) of which the present volume forms 'Book I.' As the author tells us in the preface, this is entirely a new work, no material corresponding to it having been published in the first edition. The present book is divided into twelve chapters as follows :—I Positivism in Hindu Culture; II Hindu Culture and Sociology in Sukra Nīti; III Landmarks in the History of Hindu Political Development; IV Mohenjo-Daro Monuments *vis-à-vis* Vedic Texts (c. 3500-2000 B. C.); V. Vedic Ideology (c. 2500-600 B. C.); VI Pali Literature as a Source of studies in Economics, Politics and Sociology (c. B. C. 600-300); VII The Dharma-Artha-Kāma Speculations in a Pluralistic Universe (c. 600-300 B. C.); VIII The Kautilya Question; IX From Kautilya to Varāhamihira (c. B. C. 300-600 A. C.); X From Harsha to Hemadri (c. 600-1300); XI From Chandès'vara to Rammohan (c. 1300-1833); XII Hindu Philosophy's Contributions to Positivism. The author begins by fully demonstrating by the testimony of some Western savants as also by a reference to a mass of literary evidence from ancient and mediæval Sanskrit literature that the positivist

or materialistic, strands of Indian culture, the objective realities of Indian life through the ages, have "furnished the very foundations of Indian creativeness and *elan de la vie*."

The present work is mainly an attempt (and a highly successful attempt) at placing some of the data of socio-economic and socio-political life gleaned from Sukracharya's "Artha-shastra." As far as the vast fields of Hindu literature on economics, public finance, jurisprudence, social order, and international law alone is concerned (not to speak of the enormous field covering other aspects of Hindu 'positivism'), their proper elucidation analysis have yet to be undertaken in an intensive manner. Students will eagerly look forward to Dr. Sarkar and his learned colleagues and disciples continuing this valuable series, and, if possible, bringing it to an early completion.

The Untouchable Classes of the Janjira State :—By M. G. Bhagat, (University of Bombay, 1938). Pp. 26.

This is a reprint of an article contributed by the author to the *Journal of the University of Bombay* for July, 1938. The total population of the Untouchables of the Janjira State is 9401, distributed among five castes as follows :—Mahar, 7364, Chamar 1828, Koli-Dhor 184, Bhangi 17, and Mang 8. The average size of a Mahar family is 5.5 and that of a Chamar family is 7.0.; 25% of Mahars, and 24.3% of Chamars are employed

in agriculture. 20.3% of Mahars and 8% of Chamars are employed as domestic servants; 48% of Chamars follow the caste occupation of shoe-making; the rest follow subsidiary occupations. The average annual income of a Mahar family is Rs 106/12 *as.*, and that of a Chamar family is Rs 139/4 *as.*, being far below that of other agricultural classes. This is inadequate for the necessary requirements of decent human existence. The average debt of each Mahar family is Rs 72.1 and of each Chamar family Rs 107.8. The literacy of these classes, according to the Census Report of 1931, is 2.3, and according to the author's computation is 4.2.

Promotion of education and equal social and educational opportunities with other communities and suitable means to remove untouchability, are the principal recommendations made by the author for the social and economic uplift of these communities.

Intensive studies like the present of the different tribes and communities of India are greatly needed. And it will greatly add to the value of such studies if with such statistical enquiries, are also combined investigations into social organization, customs and mentality of these communities with a view to devising ways and means for improving them.

History.

Nadir Shah :—*A Critical Study Based mainly upon Contemporary Sources.* By L. Lackhart. With

a Foreward by Sir E. Denison Ross. (Luzac, 1938).
Pp. 344. 21S.

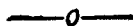
This is a learned, conscientious, well-written and illuminating history of the achievements of the great Turcoman military adventurer of obscure origin who, when asked about the pedigree of his son Nasrullah (for whom he demanded the hand of an Indian princess great-grand-daughter of Aurangzeb), replied that he was "the son of Nadir Shah, the son of the sword, the grandson of the sword, not unto seven but unto seventy generations." A great military genius, a master strategist, a splendid organiser and trainer and military leader of the first half of the eighteenth century, Nadir not only rose from a shepherd boy to be the Shah of Persia, but succeeded in liberating Persia from the grip of mighty foes and raised her from the lowest depths to the proud position of being the foremost power of the then Asia. Unlike Aurangzeb and some other Muslim rulers of India, Nadir was free from religious fanaticism. In fact, he appears to have lacked, at any rate in his later years, any religious convictions at all, as Dr. Lockhart informs us. His persecutions of the Shi'as are attributed by our author to purely secular reasons. He was most tolerant to his Christian subjects, with whose freedom of worship he never interfered. He raised no objection to the presence of foreign missionaries in Persia. This was probably due to the fact that this did in no way stand in the way of his vaulting ambition and inordinate greed and love of conquest.

We have here a vivid account as to how by his excessive selfishness and greed and vaulting ambition, his barbarous atrocities and insane cruelties, his diabolical fierceness, his total insensibility to human sufferings, his crushing taxation upon his subjects in all parts of his empire, not exempting even the members of his own family, and his terribly repressive measures alienated all, and how he was finally assassinated, and his line was extirpated (with the exception of his grandson Shahruk), and how Agha Muhammad Shah on ascending the throne, had Nadir's remains exhumed and brought to Teheran, where they were laid under the threshold of the palace, so that "whenever he went abroad he might trample upon the dust of the great persecutor of himself and his family." To the student of Indian History, particular interest attaches to Chapters XII to XV, which deal with Nadir's invasion of India in 1739. As our author concludes by saying, "A great deal of work yet remains to be done before it can be claimed that our knowledge of Nadir Shah and his times is complete." We look forward to an early second edition of this well-written and scholarly book which will incorporate all relevant information buried in the archives of libraries and record-rooms and newspaper files of various European and Asiatic countries to which the learned author refers in his concluding paragraph. The get-up of the book is excellent, and the illustrations and maps add to its value.

Oriental Culture.

Arabica and Islamica. By U. Wayriffe.
(Luzac, 1936). Pp. 404. 15s.

This interesting and suggestive volume consists of twenty-eight chapters or sketches and essays, which deal briefly with Arabic language; Early Literature; Poems and the Koran; Life of Muhammad; Traditions of Bukhari (compiled about 200 years after Muhammad's death); Miracles; the custom of burying alive of female infants; veiling of woman; Arab historians; the stories of Antar and Beni Hilal; Later Classical Poetry; Risalet Al Ghafram; Bāha-ed-din Zoheir and Ibn-Al-Farid; and other authors. It is an useful addition to the literature on the subject.



Obituary.

It is with deep sorrow that we have to announce the death of one of the pioneer anthropologists of India. The late lamented Professor Sarat Chandra Mitra, M.A., B.L., left a lucrative practice at the Bar to devote all his time and energies to the study of Anthropology. He was born in Calcutta on the 15th November, 1863, and died on the 15th December, 1936. Even when he practised as a lawyer at Chapra (Bihar), he devoted his spare time to the study of Anthropology. He specialized in the study of folk-lore. He was a prolific writer. His anthropological articles, mostly on comparative folk-lore, number well over four hundred, and, when collected and published, will fill two handsome volumes. His numerous contributions on the folk-lore of India to the pages of various Anthropological magazines, notably in the *Journal of the Anthropological Society of Bombay* form a monument of his ethnological labours. Several articles from his pen also appeared in this Journal. He was a Lecturer in Anthropology in the Calcutta University from 1921 to 1926. As a man, he was very amiable, possessed a high character and was loved and respected by his pupils, colleagues and others who came in contact with him. We offer our sincerest condolence to the members of his bereaved family. We hope his writings will be collected and published in book-form either by the Calcutta University or by his worthy sons, as a monument of his scholarship and indefatigable labours in the cause of anthropological science.

